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PIPELINE SAFETY PROGRAMS REAUTHORIZATION

HEARING

BEFORE THE

SUBCOMMITTEE ON SURFACE TRANSPORTATION

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

FIRST SESSION

ON

REAUTHORIZATION OF THE PIPELINE SAFETY PROGRAMS

OCTOBER 6, 1987

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REAUTHORIZATION OF PIPELINE SAFETY PROGRAMS

TUESDAY, OCTOBER 6, 1987

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
SUBCOMMITTEE ON SURFACE TRANSPORTATION,
Washington, DC.

The subcommittee convened at 9:50 a.m. in room SR-253, Russell Senate Office Building, Hon. J. James Exon (chairman of the subcommittee) presiding.

Staff members assigned to this hearing: Sheryl Webber Washington, professional staff member; Robert Holleyman, staff counsel; and Gerri Hall, minority professional staff member.

OPENING STATEMENT BY SENATOR EXON

Senator EXON. The subcommittee will please come to order.

First the Chair would like to express its apologies to our witnesses. A vote has just been concluded on the floor of the United States Senate and I was necessarily delayed.

This morning the Surface Transportation Subcommittee will hold a hearing on the reauthorization of the Natural Gas Safety Act of 1968 and the Hazardous Liquid Pipeline Safety Act of 1979.

The record developed through this hearing will help the Commerce Committee fulfill its responsibility to ensure that pipeline transportation in the U.S., with over one and a half million miles of gas pipeline and 150,000 miles of pipeline transporting hazardous liquids, is safe as it can possibly be.

There are a number of legislative proposals and safety considerations to be addressed today by the witnesses, issues including the adequacy of the regulatory authority which the Department of Transportation has exercised, the process and frequency of pipeline inspections and testings, the classifications of the pipeline operators and inspectors, and the need for a mandatory one-call notification system in all states containing underground pipelines.

During the course of today's hearing, we will be receiving an overview of the Federal pipeline safety program. We will also hear from our colleague Senator Dave Durenberger regarding his concerns in this area and suggestions that he has for corrective actions.

We will also be hearing from two panels, one with a representative from the State government utility commissions and the second comprised of representatives of the oil and natural gas industries.

It is my hope that through this hearing we will provide the committee and the Senate with a record upon which it can act, in an effort to promote safe and effective pipeline safety programs.

With these remarks, I will call now for the opening witness, the distinguished Senator from Minnesota, Dave Durenberger. Welcome, Senator. We are very happy that you came by this morning.

STATEMENT OF HON. DAVE DURENBERGER, U.S. SENATOR FROM MINNESOTA

Senator DURENBERGER. Mr. Chairman, thank you very much for the opportunity, and I for one know of your deep concern for this issue and I am complimented by, as is everyone here, with the time that you are committing, not only to these hearings, but to the concerns expressed by the hearings.

I am also pleased that you have included Mr. William Barbeau, the Director of the Minnesota Office of Pipeline Safety, on your witness list this morning. Bill and I go way back in Minnesota, where he is in the wrong party, looked at from my perspective, not yours.

But we came to know each other when we were both Commissioners in one of the better park reserve districts in the United States in Entomen County. And so I have admired the Governor's good judgment in appointing Mr. Barbeau as Director of the Minnesota office.

He will share with you this morning the report, a summarized version according to your rules, of this report, of the Minnesota Commission on Pipeline Safety, which was appointed by Governor Perpich to investigate the causes of a fatal pipeline accident which occurred in Mounds View, Minnesota, which is a northern suburb of the Twin Cities, in the summer of 1986.

The work of the Pipeline Safety Commission will, I am sure, make a valuable contribution to your hearings, as it did for the pipeline safety legislation which I introduced in the Senate earlier this year.

Mr. Chairman, the pipeline accident which occurred in Mounds View in July 1986 and which claimed the lives of two of our citizens should not have happened. It should have been prevented by government programs to assure the safety of pipeline operations.

With hindsight, we see a troubling safety record by the company which owned and operated the pipeline that ruptured in Mounds View. The operations of the company had been the cause of a series of accidents in Minnesota dating back to the late 1960's.

As a result of the environmental and property damage caused by these accidents, this company has been subject to more fines than any other corporate citizen in the history of the state of Minnesota.

And that was all before the accident in Mounds View. In its aftermath, the U.S. Department of Transportation has imposed on this company the largest fine in the history of Federal pipeline regulation for failures in corrosion protection and other operations of its facilities.

Why government failed to act on the troubling safety record of the company before this tragedy occurred must be the focus of our inquiry as we prepare to reauthorize the pipeline safety statute.

In light of this accident, we must not conduct business as usual in this round of reauthorization. Based on my reading of the report of the Minnesota Pipeline Commission and conversations I have had with the parties involved, in fact from the day that it happened, I think there are three major factors which contributed to government's failure in this case.

First, it is a general attitude about pipeline operations which assumes that pipelines are comparatively safe and thus no further regulation is needed. This attitude has been pervasive in the reauthorization hearings on the pipeline safety program which have been held in this committee over the past several years.

You will no doubt hear testimony today that hazardous liquid pipelines are safer than any other mode of transportation. You will hear comparisons of injuries and fatalities from pipeline accidents to other modes of transportation, like airlines, highways and rail freight.

But those statistics have no bearing on the Federal regulatory program for pipelines. The number of people who die in airline accidents each year has no more relevance to the questions before this subcommittee today than the number of people who die of lung cancer or statistics on infant mortality.

Whether we consider the safety record of the pipeline industry reasonable or not can only be determined by looking at the investment and the effort for safe operations actually made by the pipeline operators.

If they are investing some of their profits in the technologies which are reasonably available to make their operations safer, then they should demonstrate that effort with charts and graphs on those investments and not statistics on airline fatalities.

I, along with eight of my colleagues, introduced legislation which would require the use of new technologies and practices in the pipeline industry. These proposals should be judged by a standard which asks how safe the pipeline industry might be, and not what is acceptable in light of the other risks adopted by modern society.

The second factor which contributed to the failure of government in this case is a lack of resources. After accidents in Minnesota earlier in this decade, an investigation of the government pipeline safety program was conducted by the General Accounting Office. The overwhelming conclusion of that GAO report was that the Department of Transportation did not have sufficient staff and funds to carry out their mandate.

Despite hearings by various committees of the Congress on that report, the Office of Pipeline Safety continues to receive an entirely inadequate appropriation each year. We could do better even in these times of very tight Federal budgets.

In the 1985 reconciliation legislation, as you well know, Mr. Chairman, Congress established a fee on pipeline operators to pay the costs of the Federal regulatory program.

There is no evidence that the fee has worked any hardship on the pipeline industry, and it should be increased substantially so that DOT has the resources to do the job it has been given. Meeting the goals of the program, including annual inspections and audits for each pipeline company, need not add to the Federal deficit at all.

The third factor which contributed to the failure of government in this case is the preemption of state pipeline safety programs which is contained in the Federal law. In most of our other health and safety programs, we rely heavily on state and local governments to actually implement the Federal standards because state and local governments have people and resources to assure that the law is carried out.

I have no doubt that the State of Minnesota would have established an effective regulatory program for pipelines after the accidents in the 1970's and the early 1980's but for the preemption of the Pipeline Safety Act.

We have experienced the effects of preemption, Mr. Chairman, and it was not acceptable. In the case of Mounds View, Minnesota, we went through an incident where we were wholly dependent on the good offices of the United States government to protect the safety of our people.

And the impression that many Minnesotans had during that experience—and I say this, Mr. Chairman, from firsthand experience visiting with the people involved—their feeling was that their Government, the National Government, the only government that was allowed by law to protect them from events of this kind, was not on their side.

They were convinced that the Office of Pipeline Safety, even though Cynthia Douglass was out there on the scene very early on, they were still convinced, principally because of this preemption provision and some of the other things I have talked about, they were convinced that the Office of Pipeline Safety was working to serve the needs of the company and the only Federal interest was to get the line patched, get it buried, and get it back in operation. Everybody felt that way.

Mr. Chairman, if I might, I would summarize the five themes that run through S. 888, the pipeline safety legislation that I have introduced:

First is a series of provisions that require the use of better technology in the construction, operation, and monitoring of pipelines. The design and operating standards in this legislation are not unlike those which have been required in other industries to protect public health and safety.

Second, S. 888 provides a larger role for states and local governments in regulating pipelines. Current law preempts the authority of states and their subdivisions to regulate interstate pipelines.

The bill would strike the preemption and replace it with an explicit savings clause, reserving the right of states to impose requirements more stringent than Federal requirements. The same savings clause is included in most of our other environmental statutes.

In addition, the Federal regulatory responsibility could be delegated to those same states.

Third, the bill includes right-to-know provisions assuring that pipelines will be clearly marked and that local governments and nearby residents will be notified of the location of each pipeline and the materials that it carries.

Fourth, the bill requires testing of pipelines at least once every three years using the best available testing technology and requires the U.S. Department of Transportation to employ sufficient inspec-

tors to assure that each pipeline company is inspected and audited annually.

Fifth and finally, S. 888 provides increased funding of the DOT pipeline safety program and provides for grants to the states financed through fees on pipeline companies of not less than $40 million each year.

I am sure, Mr. Chairman, that the accident in Mounds View, and perhaps also the events which have recently occurred like the ones in South Dakota, will force the Congress to closely examine and thoroughly revise the Federal pipeline law. As we work for those changes, we must continually ask what would have prevented that accident.

One-call systems and public education would no doubt be helpful in improving the overall record of this industry. But those kinds of minor reforms would not have made the difference in Mounds View, Minnesota, in July of 1986. They do not go to the heart of the government's failure in this case.

They do not address the attitude which accepts without question the current safety record. They will not add to the resources at DOT for inspection and enforcement. They will not effectively engage and involve the state and local governments and officials across this country who are willing and able to contribute to safer pipeline operations.

I thank you, Mr. Chairman, for the opportunity to present those thoughts to you this morning and for your tolerance in listening to them.

[The attachment follows:]

Summary of the Pipeline Safety Act
October 6, 1987

The Pipeline Safety Act of 1987 introduced by Senator Dave Durenberger (R-Mn) contains a series of comprehensive amendments to the Hazardous Liquid Pipeline Safety Act which was adopted by the Congress in 1979 and which is administered by the U.S. Department of Transportation. S. 888 is cosponsored by Senators Stafford, Pressler, Mitchell, Daschle, Heinz, Boschwitz, Chafee and Moynihan.

The following is a summary of the major provisions of this legislation.

Release Detection, Prevention and Correction. Current law requires DOT to issue standards for the safe operation of pipelines carrying hazardous liquids. Under this authority DOT has issued rules for the design, materials and operations of interstate and intrastate pipeline systems. The amendments proposed in S. 888 would focus on the prevention, detection and correction of releases from pipelines and would require DOT to add several specific elements to their current standards. Among those new elements are:

Performance Standards for New Pipelines. The amendments require that DOT promulgate performance standards including regulations covering design, siting, construction, and operation of pipeline facilities installed after January 1, 1988. These performance standards would require the use of "best available pipeline technology" in areas that are densely populated or environmentally sensitive.

Testing and Leak Detection. The new regulations will also include provisions that require pipeline testing every three years and the installation of continuous leak detection systems that can provide immediate warning of any pipeline rupture. The type of testing required will be determined by DOT according to the conditions of the specific pipeline using the best technology for testing available.

Record-keeping. The new regulations will require pipeline operators to keep records on pipeline materials, installation practices, testing and leak detection systems. These records will be audited annually by Federal or State inspectors. Each pipeline operator is also required to submit a complete system inventory including a description of pipeline design and operating characteristics to the DOT.

Notification of a Release. In some recent accidents several hours have elapsed between the time that a pipeline system was aware of a rupture and the time that State and local public safety officials were notified. The new regulations will require pipeline operators to establish procedures for rapid notification of public safety officials.

Operating Pressure. Pipelines generally operate at very high pressures, but below the maximum pressures for which they were designed and tested (80% of maximum is common). The new regulations will require that operating pressures be substantially below (only 50-60%) design pressures in areas that are densely populated or environmentally sensitive.

Shut-off Valves. When a pipeline ruptures, hazardous liquids may be pulled by gravity back down the system increasing substantially the quantity of materials released. By placing remotely-controlled shut-off valves at regular intervals along the system, the amount of product that can flow back down the system and be released is greatly diminished. The new regulations will require the installation of shut-off valves every four miles in urban areas and every twenty miles in rural areas.

Financial Responsibility. The new regulations will require the operators to maintain insurance to pay for the cleanup of any release and to compensate third parties who are injured or who experience property loss as the result of a release.

Marking. Pipeline operators will be required to post conspicuous signs along pipeline systems and to notify local governments, local fire departments, and public safety agencies of pipeline operations. In addition residents along pipeline routes will be given written information on pipeline hazards and steps to be taken in the event of a release.

Training and Certification. DOT will also include in the new regulations a requirement that those who design and build pipeline systems receive adequate training and be certified by DOT.

In addition to the release detection, prevention and correction regulations current law and the amendments also touch on several other issues which are described in the following items.

State Preemption. Current law prevents any State or local government from setting pipeline safety standards which are more stringent than those issued by the U.S. Department of Transportation. The Pipeline Safety Act would allow these governments to set more stringent safety standards, but would not permit a State statute or local ordinance that was enacted for the sole purpose of preventing the construction or operation of an interstate pipeline.

One-call Systems. Many pipeline accidents are caused by construction or demolition activities which dig or tunnel into the pipeline right-of-way and puncture or damage a pipeline. Many States (approximately 30) operate "one-call systems" which require any person before engaging in construction activities to contact a service that maps utility and pipeline systems. S. 888 will require States to establish one-call systems as a condition of receiving Federal grants and will make those who cause pipeline ruptures liable for the damage caused by the release when they fail to use a one-call system.

State Programs. Under current law the pipeline safety program is administered by an office at DOT with only limited opportunity for participation by the States. S. 888 would allow DOT to delegate full program responsibility to those States which have adopted programs of their own which are as stringent as the Federal regulations. For States not wishing to take on the full program, there is an option to take over inspection and enforcement responsibilities from DOT. States which take the program or enter into an agreement for inspection and enforcement will receive grants from DOT for up to 85% of the cost of the programs they administer.

Penalties. DOT is given authority to issue administrative orders to streamline enforcement of the new regulations and penalties for violation are substantially increased.

Inspection. DOT has a goal of auditing each pipeline system annually, but in practice conducts only limited inspections. DOT employs only 18 inspectors for over 2 million miles of hazardous liquid and natural gas pipelines in the United States. GAO has indicated that this is a major weakness in the current program. The Pipeline Safety Act of 1987 requires DOT to employ a minimum of 72 inspectors for hazardous liquid pipelines.

Fees. Under current law DOT recovers the full cost of its pipeline safety program from fees on the pipeline industry. Nevertheless the size of the program is very small. The Pipeline Safety Act of 1987 will require that the fees be increased to not less that $40,000,000 annually which will be used in part for the pipeline safety programs of the Federal government and in part for grants to the States.

Senator EXON. Senator, thank you very much. That was a very concise, straightforward presentation, and I can assure you that we will take a look at the bill that you put together. It has a lot of excellent ideas in it.

Refresh for my memory the Mounds View accident. As I remember it, the Mounds View accident was a significant pipeline accident that we have the responsibility to take a look at and to see what we can do to see that that type of accident, if it was a typical accident, does not reoccur.

Could you give me some of the highlights? Refresh my memory on it, and in your opinion was it typical of the potentially serious problem we have on our hands, or serious problems?

Senator DURENBERGER. Well, several of the contributing factors to this particular accident—first of all, the ruptures occurred in a residential area. The gasoline was under very substantial pressure. In fact, it was under greater pressure than it should have been operating under under those same kinds of circumstances, particularly in urban areas.

It ruptured in an area that was—of the pipeline, that was corroded; and there was no automatic shutoff of any kind, so it freeflowed for some period of time that I cannot recall.

I do not also have in front of me the quantities included in that spill. But what happened in effect was that the gasoline started running down all the residential streets, and a woman who was delivering newspapers at about 4:30 in the morning stopped her car and it was idling as she delivered the newspapers, and a spark ignited the gasoline as a mother and one of her children was coming out of the home, and they were consumed by the fire.

But among the things that could have been prevented, obviously, was the condition of the pipeline itself, the pressure under which the gasoline was operating, there was no automatic shutoff valve at any point that would have reduced the flow of gasoline, and the location of the leak would have been identified sooner if you had the kind of leak detection equipment that is available today, that could have been in that pipeline.

And the other thing and the really tragic thing, I suppose, is that nobody in the community—the fire department, the police department, none of those people—knew what was in the pipeline. And so when the rupture occurred, they were not prepared to know exactly what was going on at that particular point, who to call, where to shut it off, and all that sort of thing.

And so I think those are some of the contributing factors. And again, it is sort of a typical situation that could be occurring just about anywhere.

Senator EXON. Is it not true that a large percentage of our accidents in these areas occur because of excavation of ground without knowledge of the excavator that there is a pipeline of some type in the area?

Is not that type of accident even more typical than what happened in Mounds View?

Senator DURENBERGER. Well, I am sure that that is true, and I cannot give a comparison, but I recall from previously delving into this situation that that is a common occurrence with natural gas pipelines in particular.

I think it is less likely to occur with this kind of a transmission, pipeline transmission system. But I know that it occurs, and it may well be more common than the kind of accident I have described.

I just know that this one in the State of Minnesota in particular, this kind of accident has occurred repeatedly in 1967 on through 1986.

Senator EXON. In this particular Mounds View accident, I am curious to know, the pipeline company could certainly tell, I would assume, from their gauges that they lost pressure on a line, which would have indicated a leak, a serious leak.

How quickly did the operator of the gas line respond to the situation?

Senator DURENBERGER. I am going to have to leave that to Mr. Barbeau, if he can refresh his recollection on it.

Senator EXON. I thought you might know. In other words, but the basic thrust of the legislation that you have propounded is to do a better job of inspecting and have more uniform ways to handle these accidents when they happen. Is that a fair summation of the bill that you propose?

Senator DURENBERGER. Well, it begins, Mr. Chairman, with using best available technology. That does not mean anybody has to create any exotic technology or to go to some fantastic R&D expense. It merely requires the use of best available technology.

From the beginning of this bill, the first draft of it was built on my familiarity and the work that I had done on leaking underground storage tanks, where we had done a lot of work on corrosion and so forth.

And the first draft of this bill talked a lot about double liners and double wall types and so forth. We have now sort of relaxed that approach to an approach that would be more responsive to land use, to geology, to hydrology, and a variety of those factors.

But in each case, it simply argues that best technology, both in the installation of the pipes, given where they are located, and the kind of products that will be put through the pipes, and best available testing technology be used. Then in addition to that, there are these other requirements relative to state and Federal inter-relationships on making sure that the pipeline company conforms to standards that are agreed to, the inspection requirements, the auditing of the company at least every three years to make sure the company has in place an inspection and installation and a testing program that is appropriate as well.

Senator EXON. Just one final question. Does your bill address not only pipelines, but underground storage tanks that you mentioned? We have an increasing problem, it seems to me, with buried gasoline tanks generally in filling station areas, and later corrosion takes over and there is a leak.

Sometimes it seems to go on for an extended period of time, with the attendant hazards. Would your bill cover buried gasoline storage tanks as well as pipelines?

Senator DURENBERGER. The buried gasoline tanks are covered in several of the statutes. The most famous one—and I am surprised that you did not use this back in 1984 when we created the leaking underground storage tank legislation; its acronym, of course, was

LUST, and I was able to get a fair number of my colleagues to get onboard the legislation because the acronym was very catchy.

And out of that legislation in 1984 and 1985 developed the authorization for leaking underground storage tanks. Now regulations are coming out from the Environmental Protection Agency, and so a good deal of the storage concerns with certain small tank exceptions, agriculture exceptions, and so forth are already in the——

Senator EXON. So your bill is directed at pipelines?

Senator DURENBERGER. That is right.

Senator EXON. Thank you very much.

The ranking member has arrived and I would like to call at this time on Senator Kasten for any opening comments and questions that he has for the Senator from Minnesota.

Senator KASTEN. Mr. Chairman, thank you.

I do not have any questions at this time. I simply want to commend Senator Durenberger for his leadership in this very, very important area, and we look forward to working with you.

And I understand there is some legislation in the House, and there is a lot of work that needs to be done. But I just want to commend you for your leadership in this important area.

Senator DURENBERGER. Thank you very much.

Senator EXON. Senator, thank you very much. We appreciate your taking the time and effort to come over here, and we know of your major concerns and expertise in this area. We are going to be calling upon you from time to time as we work our way through the suggestions that have been made.

Thank you for coming.

We will now go ahead with Cynthia Douglass, Administrator, Research and Special Programs Administration, Department of Transportation.

Ms. Douglass, would you please come forward at this time, and welcome to you. We would ask that you please proceed with your statement at this time. We will be pleased to enter into the record without objection the total written statement that you have, and we would appreciate it if you could summarize in as brief a period as possible.

STATEMENT OF M. CYNTHIA DOUGLASS, ADMINISTRATOR, RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION, DEPARTMENT OF TRANSPORTATION, ACCOMPANIED BY RICHARD L. BEAM, DIRECTOR, OFFICE OF PIPELINE SAFETY

Ms. DOUGLASS. First I would like to introduce my colleague, Dick Beam. Dick is the Director of our Office of Pipeline Safety, and he is here with me today.

Senator EXON. Welcome.

Ms. DOUGLASS. Mr. Chairman, I am delighted to be here today to discuss the authorization of our pipeline safety program for fiscal years 1988 and 1989. We are requesting a total of $9.6 million for fiscal year 1988. That is an increase of $1.1 million over this past year.

As part of our authorization request, we are also seeking two significant legislative changes which we believe will enhance the safety and effectiveness of our Federal-state program:

An amendment is proposed to grant the Secretary the authority to set qualification requirements for states in order to participate in the pipeline safety grant program, including qualifications for state pipeline inspectors. These qualification requirements would require certain levels of training and experience for state pipeline inspectors, thus ensuring a more uniform level of regulation and enforcement and enhancing safety.

We have worked with the states on this provision and I believe Dale Johansen will be testifying a little later in support of this provision.

Another proposed amendment would limit the amount of indirect expenses a state may charge to its pipeline safety grant program. Setting a limit for indirect expenses would result in a greater amount of the federal dollars going into activities that are directly related to pipeline safety.

My statement will highlight the recent progress we have made towards fulfilling our mandates under the two statutes that guide RSPA's programs, the Natural Gas Pipeline Safety Act and the Hazardous Liquid Pipeline Safety Act.

This past year has been extremely busy for the Office of Pipeline Safety. The next year also promises to be a significant policy year. There is not time to mention all of the activities, but I would like to highlight a few.

First, we successfully implemented the congressionally mandated user fee for 1986 and for fiscal year 1987. The legislation was passed about a year and a half ago, and in that time we have implemented the program and collected $8.2 million in fiscal year 1986 and $8.9 million in fiscal year 1987.

The user fee is under challenge by Mid-America Pipeline Company in United States District Court. The suit claims the user fee constitutes an invalid delegation of the taxing authority of the Congress.

The United States Magistrate assigned to hear the matter has recommended that the user fee be declared unconstitutional. The Department of Justice, which is representing us in the case, has filed objections to the Magistrate's recommendations.

We believe that pipeline operators benefit from our Pipeline Safety Program and, hence, should be charged for the program. We will keep you informed as that develops.

Second, and probably our most important safety accomplishments, are in the management of the enforcement program. I will highlight those efforts.

We have divided all of the pipeline operators which the Federal Government has jurisdiction over into pipeline inspection units. We have identified 1,200 inspection units. With our current inspection staff of 20, we plan to perform a comprehensive inspection of each unit on an average frequency of once every 2½ years.

This concept assures that each part of a pipeline system will be inspected on a periodic basis. It also assures that at least a portion of large companies will be inspected annually.

For example, the Williams Pipeline Company consists of nine inspection units; therefore, at least three units will be inspected every year.

We are establishing a pilot program listing operators or the pipeline inspection units by the priority in which they should be inspected. We have implemented this program for our regions in fiscal year 1987 and will make it available to our state partners in fiscal year 1988. This will assure that operators or inspection units with lower ratings are inspected sooner and more frequently that those with higher ratings.

We have also recently completed a review of our enforcement procedures and penalty provisions and will propose amending our regulations where necessary and recommend legislative changes where we feel they are necessary. Our recommendations will be forwarded to you shortly.

We have already developed new enforcement guidelines implemented in August 1987 to achieve more effective, uniform nationwide enforcement and to increase the use of civil penalties.

Moving beyond enforcement into other areas I would like to highlight, we have contracted with the Transportation Systems Center in Cambridge, Massachusetts to undertake an extensive and indepth review of our data collection and management system.

We also have under way a number of research and development programs, two of which I believe are of particular interest to the Committee.

The first relates to the smart pig issue. That is a device that runs through a pipeline and measures the amount of metal loss. Sometimes it will be able to show metal loss, and you go out and dig up the pipeline at that location and you can identify in some cases corrosion. That is a good tool in many cases to help identify problem areas on a pipeline.

A project has been initiated by the Gas Research Institute to develop a set of criteria for requiring the use of instrumented pigs to detect corrosion in natural gas and hazardous liquid pipelines.

We will be following closely the development of that project and, depending on our appropriation, we would like very much to do some research in this area. We do not have that in our fiscal year 1988 appropriation, so if we end up getting the money, we will start a project and probably work with the GRI. If we do not, we will have to wait until fiscal year 1989.

Second, with respect to hazardous liquid lines, studies are under way on the cost benefits of applying the outside force damage rule to hazardous liquid pipelines. We have recently completed a cost benefit analysis showing that it is cost beneficial to apply the outside force damage rule to hazardous liquid pipelines. So we will begin initiating rulemaking on that shortly.

We have also done a number of analyses and reports. Again, I will just mention those which I think are of interest to the Committee.

One is that whenever there is a very serious accident, we always look at that accident very carefully and try to make internal recommendations to ourselves about how we can improve our program. We completed a study on the Texas Eastern pipeline system

last year and made recommendations to ourselves, which we would be glad to make available to the Committee.

We are in the process of completing a report on the Williams pipeline system.

We also have under way several very important rulemaking projects. As provided in the legislation passed last year, operators are going to be required to report hazardous conditions and other safety-related conditions affecting the operation of gas and hazardous liquid pipeline facilities.

We issued a notice of proposed rulemaking in September. Allowing time for comments, I expect to issue a final rule sometime in December 1987.

We also have issued two Advance Notices of Proposed Rulemaking soliciting comments on the Minnesota Pipeline Commission Report and different ideas that have appeared in legislation as a result of the Minnesota situation. We are in the process of evaluating those comments.

Another important part of our program is the federal/state partnership. We believe that we have fostered a model program in this regard. One reason for our success in addition to the grant program is our annual federal/state meeting.

We get together with the states and talk over all of our problems, and the states recommend any changes in our program, including regulatory changes that they feel would be helpful. I believe that we have been responsive to the states in this regard.

Finally, it is important to note that the Secretary of Transportation's Safety Review Task Force has begun an analysis of RSPA's Pipeline Safety Program. That review is now scheduled for completion by the end of 1987. The task force will not only address our program but also other recommendations that have been made by the Minnesota Pipeline Commission and by others.

We believe our program has been successful. We have and will continue to make improvements as needed and believe we are responsive to concerns raised by Congress, the NTSB and the states. The accident statistics are low. The numbers fluctuate, but the overall trend has been downward.

Last year, of the 219 natural gas failures occurring nationwide, there were 23 fatalities and 106 injuries. Of the 203 hazardous liquid pipeline accidents, there were three fatalities and 32 injuries. Twenty-six of those 32 injuries were the result of one accident. The twenty-six people went to the hospital for a check-up and were examined and released. They had inhaled some fumes.

In 1986, RSPA actively investigated several pipeline accidents. As a result of one of those investigations we have made a number of internal recommendations which we are pursuing. We intend to do the same when we have completed our second investigation.

The NTSB and several members of Congress have also made recommendations for program improvement. I assure the committee that we will evaluate all of these recommendations with the objective of improving the public safety in as practicable a way as is possible.

That concludes my statement, and I will be glad to answer any questions you might have.

[The statement follows:]

79-328 O – 88 – 2

STATEMENT OF M. CYNTHIA DOUGLASS, ADMINISTRATOR RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION

Good Morning, I am delighted to be here today to discuss authorization of our pipeline safety program for Fiscal Years 1988 and 1989.

My statement will highlight the recent progress we have made toward fulfilling our mandates under the two statutes that guide RSPA's programs-the Natural Gas Pipeline Safety Act of 1968 (NGPSA) and the Hazardous Liquid Pipeline Safety Act of 1979 (HLPSA).

We are requesting a total of $6.9 million for the pipeline safety program for Fiscal Year 1988 to be distributed as follows:

Under the NGPSA $3.7 million for the expenses of the Federal natural gas pipeline safety program conducted by the Office of Pipeline Safety.

Under the HLPSA $921,000 to carry out the hazardous liquid pipeline safety program; and

Under the NGPSA and HLPSA $5 millioin for grants-in-aid to help support state-administered natural gas and hazardous liquid pipeline safety programs.

This represents an increase of $1.1 million over the amount requested last year.

Our budget request anticipates a pipeline safety program based on the following activities:

Promulgation of pipeline safety regulations;

Inspection of pipelines under Federal jurisdiction;

Enforcement of the regulations;

Training of Federal and State inspectors to inspect and enforce the regulations;

Research and development projects to prevent pipeline failures; and

Dissemination of data collection information and educational materials to those involved in pipeline transportation.

SUMMARY OF THE PIPELINE SAFETY ACTS

The NGPSA provides for Federal safety regulation of facilities used in the transportation of natural and other gases by pipeline. The HLPSA authorizes the Department of Transportation to regulate hazardous liquid pipelines for safety purposes. Both Acts provide a framework for assuring pipeline safety consisting of two parts:

(1) Exclusive Federal authority to regulate interstate pipelines and facilities, and

(2) Federal responsibility for regulation of intrastate pipelines with provisions for State assumption of all or part of the intrastate responsibility.

RSPA's safety jurisdiction over natural gas pipelines covers more than 2,300 operators of a gas pipeline network of more than 1.5 million miles. The responsibility for hazardous liquid pipelines involves over 170 operators and about 150,000 miles of pipeline which transport petroleum, petroleum products and anhydrous ammonia.

The cornerstone of our Federal pipeline safety program is the partnership which we have established with the States. Both Acts provide for a States grants-in-aid program, the purpose of which is to encourage the States to adopt and enforce the Federal regulations for intrastate pipelines. States may also contract with the Department to inspect interstate pipelines although the Federal government is responsible for the enforcement of the regulations. States may be reimbursed for up to 50 percent of reasonable expenses incurred in running their programs. Forty-eight jurisdictions have developed gas safety programs by adopting Federal pipeline safety regulations and enforcing them with substantially the same sanctions as those employed by the Department. Twenty-seven of the jurisdictions are receiving 45–50 percent funding of their program costs, and thirty-two jurisdictions are receiving at least 40 percent of their program costs. Seven States now participate in the hazardous liquid program which was initiated in FY 1986; five States have adopted and enforce Federal safety standards applicable to intrastate pipeline facilities and two States refer enforcement actions to the Department.

OFFICE OF PIPELINE SAFETY PROGRAM

Last year we requested $8,548,000 to carry out the pipeline safety program. We were appropriated $8,523,000 and were required to spend $200,000 at the Oregon Graduate Center for welding research. Since these dollars were not included in our request, it was necessary to take $100,000 out of the pipeline budget and $100,000 out of the hazardous materials budget. The effect of funding this project from the pipeline budget was to defer an R&D project on hazardous liquid pipelines to Fiscal Year 1988. This year we are requesting a total appropriation of $9,603,800.

As part of our authorization request, we are also seeking two significant legislative changes which we believe will enhance the safety effectiveness of our Federal/State program. An amendment is proposed to grant the Secretary authority to set qualification requirements for States in order to participate in the pipeline safety grant program, including qualifications for State pipeline inspectors. These qualification requirements could require certain levels of training and experience for State pipeline inspectors, thus ensuring a more uniform level of regulation and enforcement and enhancing safety.

Another proposed amendment would limit the amount of indirect expenses a State may charge to its pipeline safety grant. Setting a limit for indirect expenses would result in a greater amount of Federal dollars being spent for activities directly related to pipeline safety.

This past year has been extremely busy for the Office of Pipeline Safety. This next year also promises to be a significant policy year. A detailed copy of our FY 1988 budget plan (Attachment A) [1] is attached so the remainder of the testimony will highlight those accomplishments recently completed and those planned.

First, we successfully implemented the user fee program for FY 1986 and FY 1987. We identified gas and hazardous liquid operators liable for the user fee; established a schedule of fees for pipeline usage; and carried out collection of assessments as follows:

FISCAL YEAR 1986

April 7, 1986	Enactment of the Consolidated Omnibus Budget Reconciliation Act of 1985 mandating collection of pipeline safety user fees.
July 16, 1986	RSPA Notice on Pipeline Safety User Fees published in the Federal Register.
July 28, 1986	Assessments totaling $8.2 million mailed to operators.
August 29, 1986	Assessments due.

Assessments collected for FY 1986: $8.2 million

FISCAL YEAR 1987

October 18, 1986	1987 DOT Appropriations Act passed.
December 29, 1986	RSPA Notice on Pipeline Safety User Fees published in the Federal Register.
February 19, 1987	Assessments totaling $8.9 million mailed to operators.
May 20, 1987	Assessments due.

Assessments thus far collected for FY 1987: $8.9 million.

The user fee is under challenge by Mid-America Pipeline Company in United States District Court for the Southern District of Oklahoma. The suit claims the user fee constitutes an invalid delegation of the taxing authority of the Congress. The United States Magistrate assigned to hear the matter has recommended that the user fee be declared unconstitutional. The Department of Justice, which is representing us in this case, has filed objections to the Magistrate's recommendation. We believe that pipeline operators benefit from our pipeline safety program and hence, should be charged a user fee. We also believe that the pipeline operator assessment program will be upheld in the courts.

Second, we administered a merged State grants-in-aid program. In addition to the merger of the natural gas and hazardous liquids grants program, Congress also directed that $194,000 of the grant program monies be allocated to States for the sole purpose of hiring more inspectors. Our new formula and a description of the allocation rationale as well as the allocation to States participating in the natural gas program and hazardous liquid program are attached as Appendix B.

Third, and probably our most significant safety accomplishments, are in the management of the enforcement program. The highlights of our efforts are as follows:

Inspection Units.—We have divided all pipeline operators which OPS inspects into pipeline inspection units. Each unit represents a portion of an extensive

[1] The attachments referred to in this statement were not reproducible.

pipeline system (or all of a small size system) under the control of a responsible management element of an operator. We identified 1200 units and with our current inspection staff of twenty plan to perform a comprehensive inspection of each unit on an average frequency of 2.5 years. This concept assures that each part of a pipeline system will be inspected on a periodic basis. It also assures that at least a portion of large companies will be inspected annually. For example, the Williams Pipe Line Company consists of nine inspection units, and therefore, at least three units will be inspected every year.

Pipeline Inspection Priorities Program.—We are establishing a pilot program listing pipeline operators or inspection units by the priority in which they should be inspected. We will implement this program for our regions this Fall and make it available to our State partners in FY 1988. This will assure that operators or inspection units with lower ratings are inspected soon and more frequently than those with higher ratings.

Enforcement Manual.—We updated and published a one-source compilation of inspection and enforcement procedures and practices of our inspectors. This was the first comprehensive revision of this important manual.

Enforcement Procedures.—We recently completed a review of our enforcement procedures and penalty provisions. As a result of this review, we plan to amend our regulations and make recommendations to Congress to strengthen the penalty provisions. We also have developed new enforcement guidelines, implemented in August 1987, to achieve more uniform nationwide enforcement and to increase the use of civil penalties. I believe the result will be an improvement of our enforcement program.

Penalty Collections.—We collected $113,300 in civil penalties in 1986, as compared with $56,500 in 1985.

Fourth, and very important, we have contracted with the Transportation Systems Center (TSC) in Cambridge, Massachusetts, to undertake an extensive and in-depth review of our data collection activities. TSC is developing a plan for upgrading and improving the data management systems we maintain. The project goals and major tasks are included in Appendix C.

Fifth, we have underway the following R&D projects:

Study on alternative girth weld defect acceptance criteria (draft completed in FY-87).

LNG vapor dispersion reduction and mitigration methodologies (field tests completed in FY-87; project to be completed in FY-88).

Assessment of girth weld defect tolerance methodologies (completed in FY-87).

Assessment of the yield/tensile ratio as a measure of toughness and ductility of steels for pipelines (to be completed in FY-88).

Stress corrosion cracking of line pipe steels (to be completed in FY-88).

Assessment of cathodic protection criteria for carrier pipe in casings (to be completed in FY-89).

Examination of corrosion and fatigue mechanisms in ERW pipe (to be completed in FY-88).

Determination and assessment of non-regulated hazardous liquid pipelines (to be completed in FY-88).

With respect to hazardous liquid lines, studies are underway on degradation mechanisms such as corrosion fatigue, slow stable crack growth and weld defects. In FY-88, this research will continue and a comparative analysis of the regulations for highly volatile liquid pipelines, hazardous liquid pipelines, and natural gas pipelines will be started.

Sixth, in FY 1988 we expect to implement a new training program for hazardous liquid inspectors at RSPA's Transportation Safety Institute in Oklahoma City, Oklahoma. Because pipeline safety training at State-selected sites across the country has been met with such enthusiastic support by the States, we also intend to continue this program.

Seventh, we have done a number of studies and internal analyses.

Reassessment of mandatory quality assurance programs for pipeline operators (draft undergoing revision);

Grant Merger Report;

Grant Allocation Report;

Certification of operators;

Unaccounted-for-gas (four quarterly reports have been completed and we have recommended reporting on an annual rather than quarterly basis);

Transport of carbon dioxide by pipeline (draft undergoing revision);

Texas Eastern System Review;

Williams System Review (not yet completed);

Federal Role in Pipeline Safety (draft complete, undergoing review).

Eighth, we have underway several important rulemaking projects:

Reporting of Hazardous Conditions.—Operators would be required to report hazardous conditions and other safety-related conditions affecting operation of gas and hazardous liquid pipeline facilities. (Notice of Proposed Rulemaking (NPRM) was published in the Federal Register September 25, 1987.)

Damage Prevention Program.—An amendment to the damage prevention regulation for natural gas which provides compatibility with the features of many "one-call" systems, was issued in FY-87.

Application of Damage Prevention Programs for hazardous liquid pipelines. We completed a cost benefit analysis and are considering whether to initiate rulemaking. Our advisory committee favorably considered this proposal at the September 1987 meeting.

Proposals for Pipeline Safety.—Two Advance Notices of Proposed Rulemaking (ANPRM) were issued to solicit comments on whether certain new or amended standards are needed for the safety of gas or hazardous liquid pipelines. The ANPRMs contain twenty proposals including: periodic testing to determine pipeline integrity; degradition problems on electric resistance welded pipe; the need for operators to provide more information to local communities, safety agencies, and landowners to enhance emergency awareness and response; new design requirements for certain pipelines; mandatory participation in one-call systems, certification of operators; and procedural specifications for operation and maintenance plans and operator training in these procedures. In FY 1987, we evaluated these proposals and determined whether rulemakings should be further pursued. We discussed these proposals and our conclusions with our pipeline safety advisory committees and are awaiting their recommendations. Copies of the ANPRMs are attached as Appendix D.

Ninth, both the NGPSA and HLPSA established pipeline safety advisory committees consisting of industry, government and public members. We seek the Committees advice on proposed regulatory changes and on program direction.

The members of these committees are widely respected pipeline safety experts from industry, the Government and the public sector. They have given a great deal of their time to this pipeline program. Their advice allows us to conduct a far more effective pipeline safety program. The benefits are worth far more than the relatively few dollars we spend bringing these people together.

The committees met in joint session in December 1986 to consider and make recommendations on the use of smart pigs in existing gas or liquid lines; new construction and conversion in service; Federal certification of pipeline operators and inspectors; regulation of CO_2 pipelines; regulation of other potentially hazardous liquid pipelines, and reassessment of mandatory quality assurance requirements.

After detailed consideration, the committees appointed a working group to prepare a report making the following recommendations to me:

Instrumented pigs should be considered to be one of the available inspection tools to determine structural integrity of pipelines and should be further evaluated by the Gas Research Institute and the American Gas Association in projects under development.

A certification program for Federal and State pipeline inspectors should be implemented.

The Federal role should be directed at guidance coordination and oversight of small operators rather than direct involvement in certification of operators.

Regulation of CO_2 pipelines is not justified at this time, however, industry should accept responsibility for developing appropriate safety guidelines.

Quality assurance programs should not be mandated for all operators at this time, but should be a matter for continuing review and evaluation. They noted that Federal/State safety inspections of an operator's operations and maintenance records constitute a form of quality assurance.

A copy of the report is attached as Appendix E.

The committees met again, separately and in joint session, in September 1987. The joint committee considered the proposals for pipeline safety contained in the two ANPRMs (Appendix D) and made recommendations.

The gas committee evaluated proposed rulemakings on the reporting of unsafe conditions on gas and hazardous liquid pipelines and liquefied natural gas facilities; revision of the definition of gas gathering line, and other amendments to clarify existing rules. The Committee advised on gas regulatory projects regarding operation and maintenance procedures for gas pipelines, and elimination of "grandfathered" operating pressures that exceed the level allowed for new pipelines in rural areas.

The liquid committee evaluated the proposed rulemaking on the reporting of unsafe conditions. The Committee advised on hazardous liquid regulatory projects regarding application of the gas pipeline damage prevention program standards to hazardous liquid pipelines; the necessity of modifying the existing liquid safety standards or the need for additional requirements to address the safe transportation of CO_2 by pipeline, and the necessity to specify leak inspection procedures for "breakout tanks."

We are currently reviewing their recommendations.

Tenth, an important part of our program is the Federal/State partnership. We believe it is a model program. One reason for our success, in addition to the grant program, is our annual Federal/State meeting held by each of the five regions and the national meeting. In 1987, the regional meetings and the national meeting were held jointly in St. Louis, Missouri, August 31-September 2, 1987. Each year we solicit from the States recommendations for improvements in our programs, including regulatory changes. I believe we have been responsive to the States' recommendations. A copy of the 1987 recommendations and our response is attached as Appendix F.

Additionally, the Office of Pipeline Safety has implemented a management plan which allows us to track the status of projects planned and underway and to prioritize our time. I have attached a copy of our most recent work plan as Appendix G.

It is important to note that the Secretary of Transportation's Safety Review Task Force has begun an analysis of RSPA's pipeline safety program. That review, which is underway, is now scheduled for completion by the end of 1987. The Task Force will not only address our program but make recommendations regarding legislative initiatives and other proposals.

We believe our pipeline safety program has been successful. We have and will continue to make improvements as needed and believe we are responsive to concerns raised by Congress, the NTSB, and the States. The accident statistics remain low. The numbers fluctuate but the overall trend of fatalities and injuries has been downward. Last year, of the 219 natural gas pipeline failures occurring nationwide, there were 23 fatalities and 106 injuries. Of the 203 hazardous liquid pipeline failures nationwide, there were 3 fatalities and 32 injuries. Twenty-six of the 32 injuries were the result of one accident. Those 26 people went to the hospital for a checkup, were examined and released. Summaries of gas and hazardous liquid pipeline incidents are attached as Appendix H and I.

In 1986, RSPA actively investigated several pipeline accidents. As a result of one of those investigations, we have made a number of internal recommendations which we are pursuing. We intend to do the same when we have completed the second investigation.

The NTSB and several Congressman and Senators have also made recommenations for program improvements. I assure the Committee we will evaluate all recommendations with the objective of improving the public safety in as practicable a way as is possible.

[The following information was subsequently received for the record:]

QUESTIONS OF SENATOR PRESSLER AND THE ANSWERS

Question 1. In early August of this year, your office assessed a number of fines on Williams Pipeline Company in South Dakota. What is the status of Williams Pipeline efforts to make changes needed to comply with pipeline safety regulations?

Answer. On August 11, 1987 and September 14, 1987, the Office of Pipeline Safety (OPS) issued two Final Orders to Williams assessing penalties of $59,000 and $1,000, respectively (copies enclosed). Williams has paid these penalties. OPS also issued a Compliance Order which requires Williams to take corrective actions to prevent future leakage from breakout storage tank facilities at Sioux Falls. According to the terms of the Order, Williams will internally inspect all breakout tanks, make appropriate repairs within two years, and closely monitor the tanks for leakage. As of November 3, 1987, 19 of the 38 breakout tanks in Sioux Falls have been reconditioned. Williams also will be hydrostatically testing additional pipelines in South Dakota as a result of a Consent Order issued by OPS on October 9, 1987. Williams is in the process of correcting deficiencies found by our inspectors. Once these corrections are made, OPS believes that the Williams pipeline system will be in compliance with pipeline safety regulations.

Question 2. What is the status of your overall investigation of Williams Pipeline?

Answer. We have completed our systemwide comprehensive inspection of the Williams system. As a result of this comprehensive inspection, we initiated two major enforcement actions. The first enforcement action has been finalized and resulted in OPS issuance of a Consent Order on October 9, 1987, requiring hydrostatic testing of 3,100 miles of pipeline in the Williams' system, to assure that the pipe is in safe condition for long term operation.

The pipelines included in the October 9, 1987 Consent Order transport gasoline, fuel oil, and jet fuel, and are located in Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Oklahoma, and South Dakota. Under the Consent Order, Williams is required to operate many of these pipelines at substantially reduced pressures until the tests have been completed and the test results accepted by DOT's Office of Pipeline Safety. If seam failures occur during testing, the defective pipe must be replaced, and Williams must perform metallurgical tests to determine the cause of such failures.

The pipelines to be hydrostatically tested are those identified as being most at risk for possible failure of seams which are mainly found in a type of pipe manufactured before 1970. This type is called electric resistance welded (ERW) pipe manufactured using a low-frequency welding process. Under the Consent Order, Williams agreed to voluntarily perform hydrostatic tests on an additional 1,800 miles of pipeline in the 1990 to 1994 period. This Order is the most significant action ever taken by the Department under the pipeline safety program.

The second enforcement action proposed by OPS has not yet been completed. OPS will inform the Committee once the action is final. We will continue to actively monitor Williams to ensure compliance with the provisions of all orders.

Question 3. People in South Dakota have asked, "How can Williams continue to have accidents if we have an effective regulatory program?" What is your response to this question?

Answer. We believe we have a very effective pipeline safety program. Our data on incidents show that, in 1986, the hazardous liquid pipeline industry had 203 incidents resulting in three fatalities and 32 injuries. (Twenty six of the 32 injuries were the result of one accident. They were sent to the hospital for a checkup, were examined, and released.) This record was established despite the fact that there are 150,000 milies of hazardous liquid pipelines transporting more than one fourth of this country's intercity freight. Generally, pipelines are safely maintained and operated in accordance with our Federal pipeline safety standards. Nonetheless, we are constantly striving to improve our program. In 1987, we made important changes to our enforcement effort which will improve the effectiveness of our pipeline safety program. We have divided operators' systems into inspection units and have established a schedule of comprehensively inspecting each unit directly under federal jurisdiction on the average every 2½ years. The results of these inspections are being entered into our Pipeline Inspection Priority Program and the results will be used, as a management tool, to set inspection priorities.

In addition to these program changes which will ensure that at least a portion of large companies such as Williams will be inspected annually, the enforcement actions taken as a result of our system-wide assessment and accident investigations of Williams should provide further assurance that the Williams pipeline system will operate safety in the future.

With respect to the Williams operations in South Dakota, we issued a Consent Order on October 9, 1987, mentioned previously, which requires hydrostatic testing of 3,100 miles of pipeline including the Williams system in South Dakota except Line #5–12″. The pipelines to be tested have been identified as those most at risk for failure of manufactured seams. Under this Order, Williams agreed to voluntarily perform hydrostatic tests on an additional 1,800 miles of pipeline, including Line #5–12″. On August 11, 1987, the Office of Pipeline Safety (OPS) also issued a Compliance Order requiring Williams to take corrective actions to prevent leakage from breakout storage tank facilities at Sioux Falls. According to the terms of the Order, Williams will internally inspect all breakout tanks, make appropriate repairs within two years, and closely monitor the tanks for leakage. As of November 3, 1987, 19 of the 38 breakout tanks in Sioux Falls have been reconditioned.

OPS has also proposed rules requiring operators such as Williams to report hazardous conditions and other safety related conditions affecting operation of gas and hazardous liquid pipeline facilities. These reports should provide OPS inspectors with increased knowledge of potentially unsafe pipeline facilities.

The effect of these combined actions should substantially reduce the probability of future pipeline facility failures on the Williams system in South Dakota.

Senator EXON. Thank you very much. In deference to the agreement with Senator Kasten, we are pleased now to recognize the Senator from South Dakota, Senator Pressler, who has been very active in this area. He has another commitment which he has to keep.

The Chair now recognizes the Senator from South Dakota.

OPENING STATEMENT BY SENATOR PRESSLER

Senator PRESSLER. Thank you very much, Mr. Chairman, and I apologize. I am trying to give a speech on the Senate floor and also attend an Environment Public Works Committee meeting.

I want to thank you, Mr. Chairman, for scheduling this hearing on pipeline safety. As a cosponsor of S. 888, the Pipeline Safety Act of 1987, I have a special interest in the issue of pipeline safety, and I appreciate the witnesses who are here.

Pipelines carrying various hazardous substances criss-cross the United States. Over 1 million miles of gas pipeline are regulated by the Department of Transportation. These pipelines are buried several feet underground and often go unnoticed; however, these pipelines, if not properly managed and regulated, pose a severe environmental and safety threat. In 1984, there were 1,002 gas pipeline failures.

My home state of South Dakota has recently experienced a number of pipeline leaks, and I have spoken about these previously. In March 1986, 20,000 gallons of gasoline leaked from a pipeline terminal facility and forced the closure of an elementary school in Sioux Falls. The company has agreed to build a new school, but hundreds of schoolchildren were exposed to dangerous gasoline fumes. This caused a furor in the Sioux Falls community.

Approximately a year later another gasoline spill occurred at the terminal in Sioux Falls, and a pipeline break occurred north of Sioux Falls near the city's well fields. At the time of the leak, there was serious concern about contamination of the city's water supply. This would have been devastating.

The National Transportation Safety Board has investigated these incidents and RSPA has assessed penalties against Williams Pipeline Company. I want to be able to assure citizens of South Dakota that the needed changes have been made and that they do not have to worry about future pipeline leaks.

In an effort to tighten up the Pipeline Safety Program, I joined Senator Durenberger in cosponsoring S. 888, a comprehensive pipeline safety bill. The experiences in South Dakota demonstrated the need for tightening up pipeline safety regulations.

For example, in both of the spills at the terminal facility, local officials were not immediately notified. It is critical that local officials be immediately notified in any case where public safety is threatened.

Several other changes are necessary to help detect leaks earlier and shore up inspection and maintenance programs.

Mr. Chairman, I look forward to hearing the witnesses. I thank you for allowing me to interrupt these fine witnesses. I look forward to you and others in an effort to develop a sound Pipeline Safety Program.

Senator EXON. Thank you, Senator. Do you have any questions of the witness at this time?

Senator PRESSLER. Mr. Chairman, I have some which I will submit in writing. I thank you very much for your courtesy.

[The following information was subsequently received for the record:]

Question. Please provide for the record breakdown of the additional resources required to perform comprehensive inspection of each unit on an average frequency of 2 years, 1.5 years, and 1 year.

Answer. The following table sets forth the additional resources needed to perform comprehensive inspections on different frequencies.

Additional resources required	Frequency years—		
	2	1.5	1.0
Number of inspectors	4	11	24
Regional clerical	0	2	5
Headquarters clerical	1	1	2
Headquarters	1	1	2
Funding (includes salary, benefits travel)	$282,000	$693,000	$1,511,000

Senator EXON. Thank you for coming in. We appreciate your input.

I will yield to you for questions now of the witness, Senator Kasten.

Senator KASTEN. Mr. Chairman, thank you.

Cindy, the State of Minnesota Commission on Pipeline Safety has given us all a copy of their report. In the report, there are a couple of specific things that they suggested in terms of more stringent Federal regulation.

I just wanted to get your sense regarding the kinds of things addressed and how you would react to some of the suggestions that they have made.

The Minnesota report talks about the fact that hazardous liquid pipelines often extend through populated and environmentally sensitive areas and suggests that more stringent regulations are needed to assure safe operation in these areas.

Particularly, it says that the standards should require higher safety margins for operating pressures on hazardous liquid pipelines located in populated or environmentally sensitive areas.

Do you make any differentiation in the Federal laws regarding populated or environmentally sensitive areas. Are you in general agreement in terms of how you describe a populated area or an environmentally sensitive area, or is this an area of contention in which the Federal Government might have a less strict interpretation?

Ms. DOUGLASS. There is a good point to the Minnesota Pipeline Commission recommendation. Let me explain it quickly.

There is a difference between the liquid regulations and the gas regulations. Sometimes the liquid regulations are stronger, and sometimes the gas regulations are stronger. They were developed in totally different ways.

Now, specifically with regard to the urban areas, the natural gas regulations do make a differentiation in urban areas. They require

a higher standard for the operation of the pipeline in the urban areas.

Now, for hazardous liquid pipelines, the entire pipeline, not just that portion in urban areas, is subject to a higher standard than the natural gas pipeline is in the rural areas.

So there is a difference, you can see, between the way we approach the liquid regulations and the gas regulations. We have requested money, in fact, for three years to look at this problem and to bring our gas and our liquid regulations into comparability. We want to have them as comparable as possible.

Senator KASTEN. In general, going to the higher standard?

Ms. DOUGLASS. Yes. We believe it looks good for getting the appropriation for this research project in our fiscal year 1988 budget.

So we do intend to do a research project to see where we need to change our liquid regulations and where we need to change our natural gas regulations.

Senator KASTEN. What, if any, consideration are you giving to environmentally sensitive areas. You have talked about population a little bit.

Ms. DOUGLASS. Well, I think that is an area that obviously we intend to look at, and in our writings somewhere we have proposed looking into environmentally sensitive areas as well. That is more related to hazardous liquid than to natural gas.

Senator KASTEN. I would like to go through this a little bit more to try to get your responses and develop the record here. I am not sure what you just described in terms of the standards related to the pipes, but we will want to go back and look at that as we develop legislation.

The Minnesota pipeline safety report also says the standards should require the pipeline companies to submit reports on the condition of each pipeline once every 1 to 4 years, depending on the pipeline's location and other characteristics.

In your earlier testimony, you said that you were in the process of working out some kind of an inspection routine which I assume would generate some kind of a report every 2½ years.

Where did you get 2½? Did you divide the number of pipeline units by the number of people that could inspect them? Did you back into the two and a half because of resources that were available to you, or did you end up by saying 2½ years is about right?

Ms. DOUGLASS. We looked at it in both ways. We said 2½ years is about right.

I have given a great deal of thought to whether we need to ask for more inspectors and whether I should be seeking more inspectors or more staff people. After very careful consideration and the changes that we have made in our enforcement program, I did decide that once every 2½ years on a comprehensive basis is appropriate.

Now, I have prepared the numbers for you and for the House. If you feel that we need to inspect more often, I have the numbers, the number of inspectors and support staff which we would need to inspect once every year, to inspect once every 2 years, and to inspect once every year and a half.

I have also looked at whether we should be inspecting all interstate operators every year. Another concept we looked at is wheth-

er we should inspect once every 2½ years on a comprehensive basis or go to every single pipeline unit on a yearly basis and do some sort of visit, whether it would be checking a few records or going out on the pipeline for a day.

I have prepared a variety of different numbers in dollars and staff needs, but I feel that once every two and a half years on a comprehensive basis is an adequate inspection time.

In considering it, I have tried to look at our program. We have made some very important changes in the way we inspect and in the management of our inspection program. I think it is very important that the pipeline inspectors get to every unit on a periodic basis.

Now, if that is done once every two and a half years, I believe that we will be able to identify problems and we will be able to seek enforcement action that will be effective.

I have looked at our pipeline record, and I have tried to look at the accidents, not just the fatalities or the injuries, as well as the number of leaks that we have had. The number of leaks has been continually reduced. With respect to injuries, from 1976 to 1981, I believe the average then for gas was, just picking one, 385 injuries, and from 1981 to 1985 the average was 185 injuries for natural gas pipelines.

So we have reduced the number of deaths and injuries and the number of leaks that have been occurring on pipelines.

Obviously, if there is something that we are doing wrong that we could be doing better, I am going to do that.

Senator KASTEN. You have provided us, though, with how many people it would take to make these inspections at a greater frequency? You have that in some charts?

Ms. DOUGLASS. Yes.

[The following information was subsequently received for the record:]

CASE A

Comprehensive on each inspection unit every 2.5 years, plus the capability of performing some inspection activity on each non-comprehensive inspected unit annually, except for the off-shore inspection units.

CASE B

Inspect high pressure pipeline inspection units annually.

Assuming that the interstate inspection units represent the high pressure pipelines, conduct a comprehensive inspection of each interstate inspection unit annually. Balance of Federal inspection units every 2.5 years.

Additional resources required	Case A	Case B
Number of inspectors	9	15
Regional clerical	2	2
Headquarters clerical	1	1
Headquarters engineers	1	1
Funding	$601,000	$878,000

Senator KASTEN. Let me just finish, and, Mr. Chairman I appreciate your providing this opportunity to ask these questions. I just want to go through this one final area that is of interest which

came up in Senator Durenberger's and also Senator Pressler's comments.

I guess in a few of these areas local authorities were not notified or not able to be notified. In terms of the ability to locate and to isolate pipeline leaks or spills and what happens after that is going on, how do you react to the installation of remote control shutoff valves at regular intervals across the pipeline?

Please go through these very quickly because I am going to give you three or four others.

Ms. DOUGLASS. We are going to do a research project on that. There are some technical issues as to whether that would work, number one; and number two, it could be very expensive. I am not against it in urban areas, but we need more information.

Senator KASTEN. How do you react to installation of remotely monitored pressure gages in flowmeters at regular intervals?

Ms. DOUGLASS. The same.

Senator KASTEN. Lastly, what about specific emergency response procedures for locating and isolating leaks and spills as rapidly as possible? I guess that would also be immediate notification.

Ms. DOUGLASS. We are involved in rulemaking on that issue right now and do intend to move forward in this area.

Senator KASTEN. Mr. Chairman, thank you very much.

Senator EXON. Ms. Douglass, just give me, as briefly as you can, an overview of what changes, if any, you feel are necessary in the law in this whole area.

Are you satisfied with the present legislation, and do you feel essentially that most of the problems that we all recognize are showing up at increased frequency?

Do you think any extensive legislation in this area is necessary, or do you believe that your department has the basic and fundamental authority that you need to make and implement the necessary rules?

Ms. DOUGLASS. Well, I think generally that the Natural Gas Pipeline Safety Act and the Hazardous Liquid Pipeline Safety Act, which are mirrors of each other, are very, very good pieces of legislation. I have submitted a few recommended changes on those from the administration's perspective.

Now, we have been working very closely with the House authorizing committees, and we will work very closely with the Senate authorizing committees.

H.R. 2266 has, I think, some very good ideas in it. We have a problem with a couple of the things, but most of the things we could support. For example, it has in there a provision on outside force damage that we worked on with the Committee. Outside force damage is a very large problem in pipeline accidents. In fact, about half of the natural gas accidents last year were a result of outside force damage.

So there are some provisions with regard to outside force damage that I do support.

Senator EXON. Excuse me. What outside force? This would be excavators primarily? What other outside forces do we have?

Ms. DOUGLASS. It is primarily excavators hitting a pipeline, digging for many different reasons, highways and houses and that sort of thing. Most of the states do have one-call systems, a telephone

system, a network, and the operators generally participate in these systems. Sometimes the excavators do not call.

What the legislation does is encourage the states to adopt one-call systems, and it also would require excavators to call the one-call systems; to participate in and make a telephone call to the system to find out if a pipeline exists.

Senator EXON. Then you do not believe that the present legislation gives you, as the administrator, the authority you would have if this type of legislation is passed? Is that correct?

Ms. DOUGLASS. Yes, that is true. So I think that is a good provision.

Senator EXON. Earlier I listened very carefully to your opening statement, and if I recall correctly you used the term "units". You said that under the proposed changes, you would inspect certain units every 2½ years at a minimum, and in other areas, I think you said pipelines, on a yearly basis?

Am I paraphrasing what you said correctly?

Ms. DOUGLASS. That is exactly right, yes. That is right.

Senator EXON. Now, what is the frequency of inspections as of now? If you are going to go to every two and a half years as a minimum and every year at a minimum in other areas, what is the frequency of inspection? What has it been over the past 5 years?

Ms. DOUGLASS. Now we are on that schedule, once every 2½ years.

Senator EXON. How far behind? Five years? Three years?

Ms. DOUGLASS. Do you mean how far back? This program was implemented about a year ago.

Senator EXON. Oh, the program that I just referred to?

Ms. DOUGLASS. Yes.

Senator EXON. Before that, how long was it?

What I am trying to get at is if it has been the program for every 2½ years and one year on other programs, what was the frequency previous to the newly implemented inspection program that you have referred to?

Ms. DOUGLASS. The inspectors made decisions based on their own concerns. They would go out to visit pipeline companies maybe once a year. They might never get to a particular unit of a pipeline company. For example, in the Williams pipeline incident, the units of Williams that had the accident had not been inspected for a long period of time. I think it was 7 or 10 years. That, to me, is wrong.

Senator EXON. Do you mean that is an unreasonable length of time between inspections.

Ms. DOUGLASS. Yes; it is wrong. It is terrible, but they did it based on their own decision based on their knowledge of pipeline systems. We have put it, in my opinion, on a much better management system. We have broken each company down into units. Every unit will be inspected comprehensively once every 2½ years.

In addition to that, we will prioritize. We will have a set of criteria, and we will rate pipeline units and then inspect those that have a lower rating first and more often.

Senator EXON. Ms. Douglass, what system currently exists to notify state officials and emergency response personnel in the event of a pipeline accident? I assume that there is a written format that is followed?

Ms. DOUGLASS. Generally, we have rather performance-oriented standards requiring companies to have emergency response procedures. In some cases, the company's operation and maintenance manuals set out the guidelines on what they intend and how they intend to inform people once an accident occurs.

In our inspection, we look at those and determine whether or not those criteria are adequate. We have decided that we need to be more specific generally with regard to emergency response procedures. We need to lay it out a little more specifically because we are not very happy with some of the things that we have found. That is number one.

Number two, we do intend to seek more information from the operators such as maps, and we intend to give those to the states and let the states then do with that what they like.

Now, the state of California really has a model program in this regard. Right now, if an accident would occur in Los Angeles, the city official, as well as the fire chief, would be able to identify within a matter of minutes the pipeline that is the problem. So I think that is a good system.

We talked with our Advisory Committee about it, and most of the people with the Advisory Committee did feel that emergency response is a state responsibility and that states should be the one to take the action. Obviously, we intend to work with the states. I think it is important to have good emergency response procedures.

Senator EXON. Ms. Douglass, in your written testimony you mentioned that a proposed amendment to grant the Secretary of Transportation the authority to set qualification requirements for state participation in the Pipeline Safety Grant Program.

Can you tell us what process is currently used to insure that participating states are in compliance with the Federal regulations?

Ms. DOUGLASS. Well, right now we look at each state program and ask the state to submit certain information to us. Then we have some criteria, and we give the states a rating. Then the grant is based on the rating. As a general rule, the better the state is, the more money it would get. We would then work with the states to try to improve their programs.

It works generally very well, but the states and the Federal people felt that it would be better if we could just plain say you are not going to get a grant at all unless you meet these qualifications including training and educational requirements.

Senator EXON. Ms. Douglass, you mentioned that California had more or less a model program.

Do I take it, then, that as far as the states in general are concerned that there is a lack of uniformity with regard to safety standards and the inspection thereof? Are we all over the map on this situation? Is it that serious?

Ms. DOUGLASS. No, it is not quite like that. Under the Federal law, the Federal Government does set the basic regulations for interstate and for intrastate pipelines.

If a state wants to participate in the program, they must adopt our regulations for intrastate pipelines, and then they can adopt more stringent standards over and above those. The State of California for their liquid lines has adopted some more stringent standards. Some states have not.

There is a very basic level of uniformity on intrastate pipelines and interstate pipelines in the United States.

Senator EXON. You mentioned California, and I am just seeking information.

Are there many other states that have implemented legislation that is stricter than the Federal legislation as California has?

Ms. DOUGLASS. I do not believe so.

Senator EXON. You therefore encourage, I take it, other states to follow the lead of California which you have referred to as more or less a model program?

Ms. DOUGLASS. In referring to the model program, I was referring to the emergency response procedures.

Senator EXON. Emergency response only?

Ms. DOUGLASS. Yes.

Senator EXON. Now, my last question has to do with this one-call system. Assuming that we mandated that, how are we going to require and how could we enforce the excavators to utilize that system if it was in place? Do you think that is a problem?

Ms. DOUGLASS. Yes, I do. The way that the House bill has handled this situation is through the grant program—not only do you have to already meet our basic criteria to get a grant, but then they would adopt our provisions on inspectors qualifications, so the State should be subject to that.

But the bill, as part of the grant allocation process, also requires the States to have a one-call system. And the one-call system has to have certain basic elements.

And I support most of those elements. One of the elements would be that the State has to require excavators to belong to the system and participate in the system.

I think that is essential. But I do not want the Federal Government to have the jurisdiction over excavators, because I do not see any way we could enforce it.

We are not out there watching people dig. And if we now spread out pipeline inspectors more thinly, I think that would not be a good idea.

I think the States are in a better position to enforce and to oversee that project.

Senator EXON. Ms. Douglass, thank you very much. We have appreciated—one more question, Senator Kasten.

Senator KASTEN. Thank you, Mr. Chairman. I just wanted to get an understanding of the role of the State government as compared to the Federal Government. It seems, especially in your last two answers, that that is kind of blurred.

Now, the State government acts, in certain cases, as your agent, is that right?

Ms. DOUGLASS. Yes.

Senator KASTEN. The State government inspects, and essentially is working for you with your guidelines, and you are paying them with this grant in aid system.

Now what happens when the State government enacts safety legislation? They are somewhat limited, is that right? They cannot inspect?

Ms. DOUGLASS. Well, let me explain. There are basically two types, there are interstate pipelines which may go all the way

across the United States; and then there are intrastate, just inside a State.

We have regulations for all inter and intrastate pipelines. Now, a State can adopt our regulations for the intrastate pipelines, and if they do that, and participate in our program, then they can inspect and enforce the regulations, the State-Federal regulations for intrastate pipelines.

Now, for interstate pipelines, we can work a contract with the State for an agency relationship, and under that agency, we can essentially agree that they will inspect the interstate pipeline, but that then on enforcement, we enforce the interstate regulations.

Senator KASTEN. And is it within their ability to enforce themselves?

Ms. DOUGLASS. Well, that is a new concept that Minnesota has just raised.

Senator KASTEN. And do you support the idea of the States being able to directly enforce safety regulations, rather than working indirectly through you?

Do you agree or disagree that the State ought to be given that additional authority?

Ms. DOUGLASS. I don't have an answer on that yet. To tell you the truth, we were looking at the Federal preemption aspect and I think that is a good idea on interstate regulations.

But with regard to enforcement, I had not looked at that issue until recently and it seems like it might not be a bad idea to me. But Dick and the Chief Counsel's office do have some concerns about that.

And I would want to talk with the States, our partners, because I know in the past they have expressed some concerns to me about allowing the States to enforce the interstate regulations. They said that they felt that was a problem.

But Minnesota has raised a very interesting idea, and I want to go look at it more carefully.

I will get back to you on it.

Senator KASTEN. Thank you, Mr. Chairman.

Senator EXON. Thank you very much. And Ms. Douglass, thank you very much, we appreciate your testimony, and you're excused.

Ms. DOUGLASS. Thanks.

Senator EXON. We will call next panel number one, Mr. Dale Johansen, chairman of the staff subcommittee on pipeline safety, National Association of Regulatory Utility Commissioners, and Mr. William Barbeau, director of the Minnesota Office of Pipeline Safety.

Would you gentlemen please come forward?

Mr. Barbeau, you have already come highly and favorably recommended as far as the Chair is concerned by the distinguished Senator from Minnesota.

Mr. Johansen, I know not from what State you come from, but if you do not come from Minnesota, I would suspect that some of your predecessors did with a name like that.

I have no way of knowing which one of you wishes to testify first. If there is not a preference we will start out with the first name on the list.

I will be glad to recognize Mr. Dale Johansen. Mr. Johansen, please proceed. We would like to be able to accept, without objection, the full text of your statement as well as Mr. Barbeau's and the other witnesses we will have today.

We would like to have you summarize in 5 minutes, if you could, so that we could move the hearing along.

STATEMENT OF DALE JOHANSEN, CHAIRMAN, STAFF SUBCOMMITTEE ON PIPELINE SAFETY OF THE NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS, ACCOMPANIED BY JOHN FLUMERFELT, DIRECTOR OF CONGRESSIONAL RELATIONS

Mr. JOHANSEN. Thank you, Mr. Chairman. My name is Dale Johansen. I am testifying on behalf of the National Association of Regulatory Utility Commissioners, which is commonly referred to as NARUC.

I am chairman of the NARUC staff Subcommittee on Pipeline Safety. With me today from NARUC is John Flumerfelt, our director of congressional relations.

For your information, I am from the State of Missouri.

Since many NARUC members are either current or potential participants in a Federal-State cooperation natural gas and hazardous liquids pipeline safety programs, the NARUC is vitally concerned with the future of these programs, and greatly appreciates the opportunity to testify on the reauthorization of their respective grant-in-aid programs, as well as other pipeline safety related matters.

The natural gas and hazardous liquids pipeline safety programs provide for the implementation and enforcement of Federally mandated safety standards to improve our Nation's pipeline transportation networks.

In order to achieve this goal, the programs rely on a Federal-State partnership, whereby the States enforce the Federal safety standards over certain natural gas and hazardous liquids pipeline facilities.

As a result of this activity, the States are eligible to receive up to 50 percent Federal funding through the grant-in-aid programs if sufficient funds are allocated for the programs.

Federal funds allocated to these programs have been put to effective use, permitting many States to establish and/or improve their pipeline safety programs, a fact which demonstrates the State's commitment to these programs is that State inspectors have contributed over 95 percent of the inspection effort put forth over the past 2 years.

Support of the grant-in-aid programs at the 50 percent funding level will allow the States' pipeline safety programs to continue to develop and make significant contributions to the national safety effort.

Since the inception of the natural gas pipeline safety program, it has proven to be a model of Federal-State cooperation.

There are currently 50 participating agencies in the program, 48 of which requested grant funds for 1987. However, based on the DOT request, 1988 will be the seventh consecutive year that appro-

priations for the natural gas grant-in-aid program have fallen short of the 50 percent matching funds needed to assure a continued high level of State participation.

What we must recognize is that the safety risks which this program is designed to minimize are substantial. For example, over the last 4 years, gas pipeline failures have resulted in 96 fatalities, and 696 injuries.

Additionally, the number of gas pipeline safety code violations discovered by State inspectors continues to be substantial, with nearly 76,000 discovered in 1986 alone.

The hazardous liquids pipeline safety program, another Federal-State cooperative program, is now in its seventh year, and 1986 was the first year that grant-in-aid funds were appropriated.

There are at least 19 States with the proper jurisdiction, and at least three States seeking such jurisdiction, to enforce the intrastate hazardous liquids safety rules.

For 1987, seven States have submitted certifications or agreements, and grant requests to DOT for participation in the program. However, grant funds available with cover only approximately 15 percent of these programs' costs.

Without adequate grant funds being appropriated, additional States may not be able or willing to embark upon a proper enforcement program, and participating States may consider dropping out of the program.

With regard to the user fee funding system established last year for the Federal-State pipeline safety programs, there are certain still some concerns among the NARUC's members pertaining to the equity of the system.

It does appear, however, that the system is working fairly well, in that there have apparently been few major problems with the assessment and collection process.

One major point which needs to be emphasized about the user fee program is that it has removed the funding for the Federal-State pipeline safety programs out of the realm of general appropriations.

It is generally agreed upon that this is a positive step in providing alternate funding for the pipeline safety programs.

With regard to the numerous pipeline safety-related legislative proposals being considered this session, the NARUC's response today is unfortunately somewhat limited in scope.

While many of the items addressed in the proposed legislation are being reviewed with the NARUC structure, our review process has generally not yet resulted in formal positions on these issues.

We would like to state, however, that we believe that pending legislation and our forthcoming DOT rule-making activities concerning many items discussed are the appropriate actions at this time.

Additionally, it would be appropriate to initiate DOT studies in areas such as the use of smart pigs and automatic shut-off devices, and to provide broad authority for the DOT to utilize in areas such as inspector and operator qualifications and certifications.

Mr. Chairman, in conclusion I would like to emphasize one final point about these pipeline safety programs. That point is that they are designed to be preventive in nature.

No one involved in these programs relishes the thought of investigating an accident. Our goal is, and must continue to be, to work to discovery potentially hazardous conditions and have them corrected before an accident occurs.

Thank you for your attention, and I will be glad to address any questions that you may have.

[The statement follows:]

STATEMENT OF THE NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS

Mr. Chairman and distinguished members of the subcommittee, my name is Dale Johansen and I Chair the Staff Subcommittee on Pipeline Safety of the National Association of Regulatory Utility Commissioners (commonly referred to as the NARUC), on whose behalf I appear today. Accompanying me is John Flumerfelt, NARUC's Director of Congressional Relations.

The NARUC is a quasi-governmental, nonprofit organization founded in 1889. Within our membership are the governmental agencies of the fifty States and the District of Columbia, Puerto Rico and the Virgin Islands engaged in the regulation of utilities and carriers. Our chief objective is to serve the consumer interest by seeking to improve the quality and effectiveness of public regulation in America. As part of that objective, many of the NARUC's member agencies are current or potential participants in the Natural Gas and Hazardous Liquids Pipeline Safety Programs.

We greatly appreciate your invitation to testify on the reauthorization of these programs. I would like to begin by emphasizing the importance of the two pipeline safety programs which implement Federally-mandated safety standards designed to improve our Nation's pipeline transportation network. In order to achieve this essential public goal, the pipeline safety program rely heavily upon a vigorous Federal-State partnership whereby the State voluntarily enforce the Federal safety regulations. Recognizing the valuable contribution that these programs provide to pipeline safety, the NARUC is vitally concerned with the future of the Natural Gas and Hazardous Liquid Pipeline Safety Programs, which are administered through the Department of Transportation's (DOT's) Research and Special Program Administration (RSPA).

Indicating our strong commitment to pipeline safety, the NARUC Executive Committee in 1982 established a Staff Subcommittee on Pipeline Safety under the Association's Committee on Gas. This staff subcommittee has been working very hard with the States, the Congress, and the Administration to determine problems in pipeline safety and find ways to improve the safety programs. In an effort to ensure that proper attention could be given to the various pipeline safety issues being addressed in Washington, D.C. and around the nation the subcommittee formed six standing task groups in 1984. The six task groups are as follows: (1) U.S. Legislative Task Group; (2) Liquid Rulemaking Task Group; (3) Gas Rulemaking Task Group; (4) ASME/GPTC Liaison Task Group; (5) NTSB Report Review Task Group; and (6) Technical Publications Task Group.

In addition, the NARUC has representation on the Technical Gas and Hazardous Liquids Pipeline Safety Standards Committees formed under the Department of Transportation in accordance with Federal law. The technical committees are composed of safety experts from industry, States and the Federal Government, and the public sector, who meet to review and make recommendations on proposed regulatory changes concerning pipeline safety.

The appeal of the natural gas and hazardous liquids pipeline safety programs, in addition to their obvious value in protecting public safety, lies in the fact that they encourage the States to contribute funding and manpower to assist the Federal Government in fulfilling its various pipeline safety responsibilities. Federal grants-in-aid are allocated to the participating States on the basis of providing up to 50 percent of the States' total program costs. As a result, these national safety programs can be carried out at only a fraction of the Federal funding level that would otherwise be required, providing an excellent return on the Federal investment.

Utilizing State resources to implement Federal safety standards reduces the need for a large Federal field staff. In addition, the Federal government gains the benefit of State expertise when enforcement responsibilities are carried out by officials best able to assess the unique requirements of a particular locality.

Federal funds allocated to this program have been put to effective use, permitting many States to establish and perfect State-level pipeline safety activities, as well as to finance personnel training, salary and equipment expenses. The States have fur-

ther demonstrated their commitment to this program by contributing over 95 percent of the national safety inspection effort over the past two years.

However, the safety risks which this program is designed to minimize are substantial. Gas and hazardous liquids pipelines in the United States total approximately one and three-quarter million miles and transport more than half of the nation's energy supply. These pipelines carry large quantities of extremely volatile substances, often under high pressure, and expose large segments of the population to risks of potentially catastrophic proportions.

The success of pipeline safety programs in identifying safety regulation non-compliance and having them corrected demonstrates the important contribution that such programs can make to Federal safety efforts. Believing in the immeasurable benefits derived from these Federal-State partnerships created for pipeline safety, the NARUC strongly supports reauthorization and increased funding for these programs. We respectfully urge the Subcommittee to encourage Federal-State cooperation in attaining a safer America in Fiscal Year (FY) 1988 by approving the reauthorization of the RSPA's Natural Gas and Hazardous Liquids Pipeline Safety Grants-In-Aid Programs at $6,987,457 and $837,640, respectively. These figures represent full 50 percent funding for these programs based upon the participating agencies' calendar year 1987 budget estimates submitted to the DOT.

NATURAL GAS PIPELINE SAFETY PROGRAM

Since its enactment in 1968, the Natural Gas Pipeline Safety Grants-In-Aid Program[1] has proved to be a model of Federal-State cooperation in its efficient implementation and enforcement of gas pipeline safety standards. As administered through the RSPA, the pipeline safety program provides up to 50 percent in Federal matching funds to assist participating States in enforcing gas pipeline safety regulations. While the Federal-State partnership in this program has worked effectively, funding in recent years has been insufficient to provide the full 50 percent matching of costs authorized by law. The NARUC strongly believes that full 50 percent funding is important to the program's continued success.

There are currently 48 State agencies plus the District of Columbia and Puerto Rico participating in the natural gas pipeline safety program 48 of these 50 participants have requested Federal funds for 1987. While a high level of State participation has continued, the funding needs have increased. For example in 1983, the participating agencies' requests for grant funds totaled $5,742,140, while for 1987 the requests totalled $6,987,457.

Based upon the DOT request, 1988 will be the seventh consecutive year that available grant funds will have fallen short of the 50 percent matching level. This year, gas pipeline safety grant allocations resulted in only four States receiving allocations equalling 50 percent of their estimated program costs while seven States are receiving allocations of less than 25 percent of their estimated cost.[2]

What the NARUC and its member commissions wish to impress upon the members of the Subcommittee today is that while we have seen many positive results from the gas pipeline safety program, there is still a lot of work ahead. For example, over the period 1983 through 1986, gas pipeline failures resulted in 96 fatalities and 696 injuries. During this same period, State inspectors discovered *76,291* violations of Federal and State gas pipeline safety standards. Although no one would guarantee that accidents will not happen, full funding for this program directly affects the quality and frequency of inspections, with a corresponding decrease in the number of fatalities and injuries. Conversely, funding reductions directly *increase* the likelihood of disaster.

The natural gas pipeline safety program is working and is an excellent example of the ability of the Federal and State governments to cooperate in protecting the public health and safety. The overwhelming State participation indicates the States' belief in the program's effectiveness. We urge the members of the Subcommittee to support the States' safety efforts by reauthorizing the Natural Gas Pipeline Safety Grant-In-Aid Program at $6,987,457 for FY 1988.

HAZARDOUS LIQUIDS PIPELINE SAFETY GRANTS-IN-AID PROGRAM

The Hazardous Liquids Pipeline Safety Program is another Federal-State partnership whereby Federal grant-in-aid funds are authorized to be provided to participating States for enforcing hazardous liquids pipeline safety regulations. The success of the natural gas pipeline safety program is a strong indicator that the hazardous liq-

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[1] 49 U.S.C. 1671.

[2] See Appendix A.

uids pipeline safety program could be equally as beneficial if given the opportunity. The States need the reauthorization of this program at adequate funding levels so that they may continue their safety efforts. The States are ready and willing to make this program work once authorization for adequate appropriations are provided for grant-in-aid funds.

Presently, at least 19 States have proper jurisdiction for hazardous liquids program eligibility through legislation, and at least 3 States are seeking legislation to provide them with Jurisdiction.[3] Seven States submitted certifications or agreements and grant requests to DOT for participation in the program in 1987.[4] If the hazardous liquids pipeline safety program is to become a viable program adequate funds must be appropriated; however, once again the DOT budget request for FY 1988 does not include adequate funding. Like the natural gas pipeline safety program, the hazardous liquids program would assist the Federal government in fulfilling its safety responsibilities, while at the same time reducing the Federal funding level that would otherwise be required.

The NARUC has historically sought funding for this program. For FY 1984, 1985 and 1986, the NARUC requested that $1 million in start-up funds be provided for the implementation of the hazardous liquids pipeline safety program; however, funds were not appropriated until 1986 and then only approximately $215,000 was provided for the program. Based upon grant requests received from the six States actively participating in the program in 1986, the NARUC supported appropriations of $770,131 for FY 1987, but only $250,407 was actually allocated to the program.

The Federal minimum safety standards for hazardous liquids pipelines have been applicable to intrastate facilities for nearly two years. However, without adequate funding the States are left with Federal regulations for the enforcement of intrastate safety measures and yet no money for implementing this enforcement. The States have an interest in this program and now have the regulations available to make it work. With the proper reauthorization and funding, the hazardous liquids pipeline safety program will play a vital role in pipeline safety.

The DOT reported that in 1984 and 1985 there was a total of 5 fatalities and 37 injuries caused by hazardous liquids pipeline accidents. For 1986 there were 3 fatalities and 32 injuries reported to the DOT. In 1986 inspectors working for the six participating States discovered *764* violations of the hazardous liquids safety standards. As with the gas pipeline safety program, the NARUC wishes to emphasize that the major goal of this program is the prevention of accidents, and that there is a direct correlation between the number of inspections and the frequency of violations and accidents.

We strongly urge the Congress to help the States untie their hands for the regulation of intrastate hazardous liquids pipelines by reauthorizing the Hazardous Liquids Pipeline Safety Grant-In-Aid Program at $837,640 for FY 1988. Safety programs such as these, which are preventive in nature, simply must not be overlooked with regard to funding.

USER FEES

While there may still be concerns over certain aspects of a user fee funding system for the Federal-State pipeline safety programs, the fact that such a system has been implemented is one with which we must deal. One concern which likely still exists within the NARUC is that of equity with regard to the monies "leaving" a State compared to the monies "returning" to a State through the grant-in-aid programs and DOT safety efforts

On the other hand, based upon information received from the DOT, the user fee program seems to be working well. There have apparently been few major problems with regard to the assessment and collection process. Additionally, it is generally believed that any major concerns about the user fee program can be worked out between the DOT, the States, and the pipeline operators through the Federal Register comment and/or rulemaking procedures available to the DOT.

We are aware that a legal challenge to the user fee funding system has been filed by a major pipeline company. It is our understanding, however, that the DOT believes that this challenge will be unsuccessful and that the user fee system will continue. If this is not the case, however, we must all be prepared to return to a system of general budgetary funding or seek alternate funding methods.

A final and highly important point about the user fee program is that it has removed funding for the Federal-State pipeline safety programs out of general reve-

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[3] See Appendix B for a list of these States.
[4] See Appendix C for a list of these States.

nue appropriations and away from accompanying budget deficit concerns. While legal questions remain, it is generally agreed that this a positive step and that alternate funding methodologies for the pipeline safety programs are essential.

LEGISLATIVE PROPOSALS

As the members of the Subcommittee are aware, there are several legislative proposals involving pipeline safety being considered in Congress this year. With regard to these proposals, the NARUC has not yet developed official positions, and in some cases has not yet decided whether to do so. Several topics are, however, being evaluated within the NARUC by the Staff Subcommittee on Pipeline Safety, through "action requests" submitted to affected member agencies, or through cooperative efforts with the National Association of Pipeline Safety Representatives (NAPSR). Specifically, evaluation of the following items is being conducted through at least one of the above avenues:

(1) the use of "smart-pig" internal pipeline inspection devices;
(2) certification of pipeline safety inspectors;
(3) certification/qualification of pipeline operator personnel;
(4) regulation of carbon dioxide pipelines;
(5) mandatory quality assurance programs;
(6) placement of a cap on "indirect" program costs which could be reimbursed to the States through the grant-in-aid programs;
(7) House of Representatives bill H.R. 2266; and
(8) Senate bill S. 888

Additionally, it is our understanding that the NAPSR has encouraged all States to respond to two recent Advanced Notices of Proposed Rulemakings published by the DOT to obtain comments from interested parties pertaining to most of the above items.[5]

With regard to many of these items, it is our belief that direct legislative action is not necessary at this time. This is especially true for those items pertaining to the technical aspects of pipeline operations. The DOT has either published or soon will be publishing advance notices of proposed rulemaking and/or notices of proposed rulemaking covering a vast majority of these items and those covered in current House and Senate bills.

It is the States' belief that the DOT rulemaking process should be allowed to be carried out prior to legislative mandates being issued on operations matters. Legislative action deemed necessary would best be directed toward requiring technical studies to be conducted rather than mandating regulatory requirements. Once the rulemaking process is completed, these items could certainly be revisited if necessary.

For those areas not involving pipeline operations, such as certification of inspectors and operator personnel, it is our opinion that the avenue of providing DOT general authority in these area would be appropriate. This will allow the rulemaking process and the excellent relationship between the DOT and the States to be utilized in determining final actions. With specific regard to item number 6 above (indirect cost caps), we do not believe anything less than a 20 percent cap on indirect costs would be appropriate. This is based upon recent analysis involving DOT, the NARUC and the NAPSR.

CONCLUSION

The NARUC wishes to stress the important role which the States have and will hopefully continue to play in the Federal-State natural gas and hazardous liquids pipeline safety programs. One point concerning these programs that must remain in the forefront is that they are designed to be preventive in nature. No one involved in these programs relishes the thought of investigating an accident. Our goal is, and must remain to be, to discover potentially hazardous conditions and have them corrected before a tragedy occurs.

The NARUC believes that Federal-State cooperative efforts, whereby the States enforce Federal safety standards through the Natural Gas and Hazardous Liquids Pipeline Safety Grant-in-Aid Programs, will ensure the effectiveness of a comprehensive safety policy for our nation's pipeline transportation networks. We respectfully urge Congress to restore full 50 percent funding to the grant-in-aid programs to ensure their continuing effectiveness. In our view, major statutory revision is not

[5] Docket No. PS-93, Notice 1—Fed. Reg. 4361—2/11/87. Docket No. PS-94, Notice 1—Fed. Reg. 9189—3/23/87.

called for at this time, as DOT appears to be responding to various concerns through their regulatory jurisdiction under the existing statutes.

We sincerely appreciate this opportunity to participate in these hearings and are committed to providing any further assistance you may require.

APPENDIX A.—1987 GAS PIPELINE SAFETY GRANT ALLOCATIONS

State	Request	Allocation	Percent of funding
Alabama	$241,014	$112,341	23
Arizona	335,580	[1] 150,454	22
Arkansas	79,947	77,361	48
California	332,450	114,276	17
Colorado	73,970	65,549	44
Connecticut	114,339	107,186	46
Delaware	12,643	12,643	50
Florida	58,781	56,652	48
Georgia	115,111	113,787	36
Hawaii	15,395	15,136	49
Illinois	193,305	116,630	30
Indiana	91,025	88,827	48
Iowa	98,759	96,289	48
Kansas	110,764	94,037	42
Kentucky	195,807	[1] 130,746	33
Louisiana	516,864	[1] 176,690	17
Maine	12,950	12,548	48
Maryland	38,470	37,778	47
Massachusetts	150,000	111,882	37
Michigan	121,100	109,973	45
Minnesota	86,555	79,501	45
Mississippi	117,340	107,702	45
Missouri	154,969	[1] 127,454	41
Montana	25,802	25,134	48
Nebraska	61,008	55,799	45
Nevada	54,575	[1] 46,346	42
New Hampshire	37,368	36,280	49
New Jersey	189,184	114,289	30
New Mexico	115,646	106,659	46
New York	980,325	268,403	13
North Carolina	105,959	101,799	48
North Dakota	32,194	31,972	49
Ohio	249,090	112,063	22
Oklahoma	92,750	92,750	50
Oregon	48,484	48,087	49
Pennsylvania	203,564	110,962	27
Rhode Island	57,078	56,561	49
Tennessee	153,594	118,874	38
Texas	519,845	157,019	15
Utah	43,350	43,350	50
Vermont	41,629	40,337	48
Virginia	133,513	96,638	36
Washington	52,315	[1] 52,315	50
West Virginia	226,900	[1] 155,219	34
Wisconsin	110,022	93,571	42
Wyoming	98,445	94,752	48
District of Columbia	34,374	32,951	47
Puerto Rico	13,305	12,479	46
Total	6,987,457	4,219,593	30

[1] Indicates that reserve moneys for additional inspection personnel are included in the request and allocation.

Note: The "request" represents 50 percent of the State's estimated budget. The "percent of funding" is the percentage of the budget represented by the allocation.

APPENDIX B.—HAZARDOUS LIQUID PIPELINE SAFETY PROGRAM—SUMMARY

States with jurisdiction	States seeking jurisdiction
Texas	Louisiana
California	Alabama
Wyoming	Washington
Pennsylvania	
Kansas	
New Mexico	
Montana	
Ohio	
North Dakota	
Arkansas	
Arizona	
New York	
Iowa	
Nevada	
Hawaii	
West Virginia	
Oregon	
Oklahoma	
Mississippi	

APPENDIX C—1987 HAZARDOUS LIQUIDS PIPELINE SAFETY GRANT ALLOCATIONS

State	Request	Allocation	Percent of funding
Alabama	$ 7,231	$ 6,832	47
Arizona	12,664	11,903	46
California	519,000	[1] 121,108	11
Mississippi	13,038	12,254	46
Oklahoma	19,000	17,763	46
Texas	257,904	72,229	14
West Virginia	8,803	8,318	47
Total	837,640	250,407	14

[1] Indicates that reserve moneys for additional inspection personnel are included in the request and allocation.

Note: The "request" represents 50 percent of the State's estimated budget. The "percent of funding" is the percentage of the budget represented by the allocation.

Senator EXON. Thank you very much, Mr. Johansen. And we will hold questions until Mr. Barbeau has his chance to testify.

Mr. Barbeau, we are happy to welcome you at this time.

STATEMENT OF WILLIAM C. BARBEAU, DIRECTOR OF THE MINNESOTA OFFICE OF PIPELINE SAFETY

Mr. BARBEAU. Thank you, Mr. Chairman.

As you know in July 1986, a pipeline failure occurred in Mounds View, Minnesota, which took the lives of a mother and her daughter.

After my recent appointment as the director of the newly created Office of Pipeline Safety, I toured the accident area. You can still see the scarred earth, the scorched trees.

The ongoing efforts of the pipeline company to replace the line is a constant reminder of that tragic day.

Believe me, that incident has had a profound impact on the public in Minnesota. Further, the accident has served as a catalyst for much of the Federal legislation being reviewed today, and as

the motivation for the Pipeline Safety Act passed by the Minnesota legislature this past May.

Governor Perpich established the Commission on Pipeline Safety in the aftermath of the Mounds View accident. The Governor directed the Commission to investigate all aspects of pipeline safety in Minnesota.

And after 4 months of intensive hearings and regulations, the Commission adopted 38 recommendations.

I ask that the Commission's report be included in the record.

Senator EXON. It will be included by reference.

Mr. BARBEAU. Thank you.

Along with that, I drop off two tapes, one of the Mounds View accident. It is a 7-minute tape from the fire department showing the six city blocks in flames, and a CBS report on pipeline safety.

I ask too that that be considered in the record.

Senator EXON. Without objection, so ordered.

Mr. BARBEAU. The report proposes a number of significant changes in Federal pipeline safety policy. The Commission's conclusions also served as the basis for the comprehensive legislative package passed by the Minnesota legislature.

As you know, Minnesota can seek certification from the Federal Department of Transportation to inspect interstate hazardous liquid pipelines, but could only carry out inspections as an agent of the Federal Government.

Minnesota urges the Federal Department of Transportation to assist States interested in seeking certification. Federal law should also be changed to permit States with approved programs to enforce Federal regulations.

Finally, States should be able to establish their own safety requirements as long as they are consistent with Federal regulations.

The Commission believes that greater State involvement in pipeline safety is both reasonable and appropriate. States are responsible for the health and safety of their residents, and since pipelines crisscross rural and populated areas throughout the country, States clearly have an interest in assuring their safe operation.

At the same time overall Federal responsibilities should be preserved, both to protect interstate commerce and to assure that reasonable standards are being set.

The Commission also recommends that the number of Federal inspectors be increased significantly. The Federal Office of Pipeline Safety currently relies on a staff of 20 inspectors for more than half a million miles of hazardous liquid and interstate natural gas pipelines.

This level of staffing simply does not permit an aggressive inspection program.

The Commission concluded that the Federal DOT needs to pursue the prevention of potential pipeline safety concerns much more vigorously. This can be accomplished partly through increased inspection, but the Department also needs to establish more stronger standards in several areas.

Federal standards should require pipeline operators to submit comprehensive reports on the condition of their hazardous liquid and natural gas transmission pipelines, and appropriate testing should be required.

Rapid detection and isolation of pipeline leaks can be enhanced by requiring remote control shutoff valves at varying distances, depending on population density, terrain, and other factors.

Federal requirements for new pipelines also need to be updated to incorporate new developments in pipe manufacture, pipeline construction, and reconstruction.

Furthermore, the Department of Transportation should be required to conduct site inspections of pipeline construction projects.

The Commission has agreed that extensive study and research is needed in a number of areas, including further advancements in the use of smart pigs and other test procedures; continued study of double-wall pipe and leak detection systems; and a study of failures and electric resistance welding practices.

The Minnesota legislature established the Office of Pipeline Safety, staffed by a director, myself, a chief inspector, and three intrastate natural gas inspectors.

We are combining the current program with the new legislation.

Minnesota will have a strong, cohesive, professional and aggressive inspection program. We will seek to obtain status as an agent of the Federal Department of Transportation to inspect intrastate pipelines as rapidly as possible.

But unless Federal laws are changed, we will not be able to directly enforce safety requirements.

One of the most important components of our State program will be a new system for emergency response to pipeline failures. Pipeline companies are required to immediately notify a State hotline when they detect that a pipeline release has occurred. Even if the location of the leak is not known, the State dispatcher will be equipped to alert all appropriate emergency response departments along the pipeline route.

One improvement at the Federal level that would help to further provide the ability of State and local governments to respond to pipeline failures would be for the DOT to require companies to regularly inform affected communities about the exact location and operation of their pipelines.

In order to reduce the frequency of third-party accidents, which is the primary cause of pipeline failures in Minnesota, the Minnesota legislation mandates the creation of a statewide one-call system for underground facilities.

I am confident that Minnesota's one-call system will be fully operational by October 1988.

We urge the Congress to require similar one-call systems throughout the country.

Minnesota strongly urges the Congress to continue to fund the grants in aid program for States to operate the intrastate program. We urge you to support increased requests by the Federal DOT for this program.

We urge the Department of Transportation to seek, and the Congress to fund, more dollars for the proper training of all inspectors, including State inspectors.

Minnesota supports the Federal certification plan outlined in some bills for State inspectors, but strongly requests the dollars to allow for timely training.

Thank you very much for your time. And I appreciate the request of Senator Durenberger to be here today.

[The following information was subsequently received for the record:]

QUESTIONS OF SENATOR KASTEN AND THE ANSWERS THERETO

A. Why was the Minnesota Office of Pipeline Safety created?

As you are probably aware, a pipeline explosion in a St. Paul suburb in July of 1986 took the life of a mother and her daughter. After extensive investigation, it was determined that poor maintenance and inadequate cathodic protection by the Williams Pipeline Company caused the tragic accident. The NTSB also charged that inadequate staffpower and the enforcement position of the Federal Office of Pipeline Safety was a contributing factor.

In response to the tragedy, Minnesota Governor Perpich created the Commission on Pipeline Safety. (The Commission report is a part of the permanent record of the Subcommittee.) The Commission recommended an Office of Pipeline Safety to be created in Minnesota with a primary purpose of increasing the scrutiny of interstate hazardous liquid and natural gas pipelines. The Minnesota Legislature, under the most comprehensive and intense hearing process ever, enacted a law with the tools necessary to significantly improve our intrastate natural gas safety inspection program, and effectively increase Minnesota's involvement in ensuring the safety of interstate pipelines traversing our state.

It is clear that the Mounds View tragedy served as the catalyst for reviewing pipeline safety issues in Minnesota.

But the creation of the Office of Pipeline Safety came to fruition because those people reviewing pipeline safety recognized the inadequacy in public safety at the federal level. Minnesota legislation confirmed a diverse and open process of review (that included industry, government, and related experts) that will lead to improve state inspections at the intrastate level, and increased involvement in interstate pipeline safety. The basic premise of the Minnesota office is one of increasing awareness and visibility of pipeline safety issues. Of course, qualified and comprehensive enforcement of Federal Department of Transportation pipeline safety regulations are a major piece of our operation.

It has been argued that the safety record regarding pipeline safety is relatively good. Irregardless of such a position-creating the Minnesota Office, and increasing state involvement in interstate pipeline safety, is a positive and necessary integration of state and federal cooperation to protect our publics' safety. In the broadest sense, both industry and government failed at Mounds View. A company was unreasponsive to providing minimum safety maintenance. Our federal government, although underfunded, failed to provide the minimum in inspection. Do not confuse the good track record of pipeline safety with the necessary involvement of state government in protecting the publics' safety. In the final analysis, the pipeline safety record can be improved, and the Minnesota bill outlines a cooperative framework for the federal and state government, the industry, and the most important people - the general public.

B. What could other states gain from such an office?

Every state has an intrastate pipeline safety program. The comprehensiveness of individual state programs varies. In fact, Minnesota's pipeline safety program barely met the minimum effort to provide a comprehensive program. The Minnesota Legislation and the bill being reviewed by you in Congress goes a long way toward improving pipeline safety. I have enclosed a copy of Minnesota Chapter 353 which can serve as a model for other states. I am confident the Minnesota act frames a quality and comprehensive pipeline safety program.

The particular "stand alone nature" of the Minnesota Office of Pipeline Safety contributes to the public safety dimension of pipeline safety. The vast majority of states run safety programs through their utility, public service, or corporation commission. While there are advantages in such an organization in Minnesota, safety is reviewed as a single issue, and does not compete with the rate making process. Safety can become diluted in a utility review process.

C. Are states taking enough initiative in promoting pipeline safety?

I can only speak to Minnesota's commitment to promoting pipeline safety. It is clear that our state feels inadequate in our ability to protect the public safety regarding pipelines. The Legislature provided the tools for a comprehensive state program on intrastate natural gas lines, but we seek federal support to inspect and enforce the federal minimum safety standards relating to interstate liquid and natural gas lines.

Yes, Minnesota is taking enough initiative relative to pipeline safety. But Senator, it is imperative that the federal government become more responsive to cooperate, and share with states in the awesome responsibility of pipeline safety. In addition, industry must accept state involvement in inspecting this system.

D. How far can individual states go in regulating pipeline safety without running into problems with being inconsistent with federal regulations?

The premise of our state program lies in implementing the minimum safety standards adopted by the Federal Office of Pipeline Safety and the U. S. Congress. A state is allowed to promulgate more stringent rulemaking under the 5A certification program (intrastate). In essence, under the present program at the Federal Office of Pipeline Safety, the state can choose to have a significant effect in pipeline safety without running counter to federal regulations. Passage of the bill being considered by the Committee on Surface Transportation will enhance the state's ability to improve pipeline safety, and better respond to an emergency situation. At a minimum, the present House of Representatives bill needs to be enacted into law by the spring of 1988. The federal legislation cannot serve as "lip service"--interstate companies have an obligation to provide specific information to state and local governments. In fact, the provisions in the federal legislation should allow a penalty clause against interstates failing to meet the law. Further, the federal government should indicate that increased cooperation between interstate pipelines and state governments will help prevent federal legislation mandating such initiatives.

It is clear that the original House of Representatives bill and Senator Durenberger's bill are a "far cry" from the legislation under consideration today. It is not my intention or purpose to reflect on the implications of the original bill, and what that bill portends for state involvement. Suffice it to say, the original House bill and Senator Durenberger's bill goes much farther in increasing state's rights. Although the process has provided for changes in the original bill, such original goals should serve as a warning light to all involved:

1) The industry has not met the highest safety standard.

2) The economic feasibility of increased safety requirements are questionable, but the bill still requires specific "studies," (double wall, leak detection systems, smart pigs).

3) State government has an integral, positive, and legitimate right to be involved in pipeline safety - at the intrastate and interstate level.

4) The staffing quotient at the Federal Office of Pipeline Safety is inadequate, and state inspection of interstates is positive way to get the job done.

5) Non-compliance orders should be issued, and civil penalties assessed by the Federal Office of Pipeline Safety and such power given to the states.

In summary, there are provisions for increased State promotion of pipeline safety in present law. The legislation you are considering is a minimum, but necessary effort at increasing State involvement on pipeline safety.

E. What additional authority do you believe states need?

In the spirit of compromise, I wholeheartedly endorse the House legislation. I suggest one additional item be added to the legislation you are considering. If a state seeks "federal agent" status to inspect interstate hazardous liquid/natural gas pipelines, such state must have the power to enforce compliance. Let me make it clear that such enforcement will include only these minimum safety regulations promulgated by the Federal Office of Pipeline Safety.

One may argue that the state does not have the skill level to inspect interstates. The new legislation will certify all inspectors and operators, so said argument is moot. Further, the Federal Office of Pipeline Safety will grant state "agent" status, and through such review, can ensure qualified inspectors and inspections.

Senator Kasten, the Minnesota Legislature, through Chapter 353, directs the Office of Pipeline Safety to seek "agent" status. It is clear that the people, through their elected representatives, want to be involved. I believe our state has the commitment, soon will have the experience, and with your help, the power to share with the Federal Office of Pipeline Safety in improving pipeline safety.

Senator EXON. Gentlemen, it will be necessary for me to adjourn this for a few minutes so I may go to the Floor and vote. I shall return very briefly.

The committee stands in recess, subject to the call of the Chair.

[Recess.]

Senator EXON. The subcommittee will come to order. Gentlemen, I apologize for the interruption, but it was necessary.

I listened very carefully to your remarks. I appreciate very much your coming here and giving us your expertise this morning. I want to congratulate Mr. Barbeau on what I think is an excellent piece of work by your Department in Minnesota.

I just have—I guess I have one question to each of you, and then two questions that I would like both of you to respond to.

Let me start out first with my first question, that I will direct to Mr. Johansen. In your testimony, you mentioned that over the period of 1983 to 1986, state inspectors discovered over 76,000 violations of the Federal and state gas pipeline safety standards.

Can you describe, without too much detail, what type of violations these were generally? Did they fall into one, two, or three major categories? And the follow-up procedures used by inspectors to ensure that corrective action was taken to try to make sure, as sure as we can, that they weren't repeated?

Mr. JOHANSEN. Certainly. I can speak from experience about our program in Missouri particularly. Based on experience in Missouri, I think that the types of violations that we find vary from different sections of the regulations, and both in severity of the violations of the regulations—it might be anything from the failure of an operator to fill out the proper record to the failure of an operator to—a significant failure that we would look at would be in the corrosion control area, overpressure protection areas.

So the types of violations, you know, vary both in scope and in the regulations that are addressed.

With regard to follow-up to see that these violations are corrected, I think most of our states have a procedure where they inform the operator, number one, that they believe they have found a violation of the code. They provide the operator the opportunity to respond to the allegation of the violation.

And then, if the operator agrees that it is a violation, the operator normally tells us what they are going to do or what they have done to correct that. And then upon finding, getting that information from the operator, we normally conduct some kind of follow-up activity to see that in fact what is going to be done has been done.

Senator EXON. Thank you very much.

My question to you, Mr. Barbeau, would be, in your testimony you indicate that the Minnesota Commission advocates greater involvement of the states in this whole safety issue, and I think we generally here on the subcommittee would agree with that.

But at the same time, I assume that you agree that Federal preemption authority is essential in maintaining some degree of stability and consistency on this matter of pipeline safety.

If you do agree with that, how would you suggest that the states increase their involvement with the interest of uniformity in mind, which I think is clearly necessary?

Mr. BARBEAU. Mr. Chairman, we do continue to support Federal preemption. I will admit that the Commission itself, while it came down on that position, there was a large minority that said if things do not improve at the Federal level they would push harder for state preemption. And there is differences of opinion among bureaucrats and state legislators in Minnesota about that.

But in terms of my role as the director of the Office of Pipeline Safety, I do not see myself on the issue of state preemption—primarily what we look for is to provide better inspection of the interstate system in Minnesota and to be able to have the power to enforce the Federal regulations.

It is not our intent or purpose to create new rules or additional rules, but we think the Federal rules in general are fairly comprehensive. That is the principal activity that the Minnesota legislature seeks, to be able to enforce the rules that the Federal Government has come up with and continuing to look at some of these other issues that need to be resolved and making stronger rules.

But we would defer to the Federal Government for interstate commerce, as well as the minimum standards being set.

Senator EXON. I asked a question, Mr. Barbeau, of the previous witness with regard to, if we mandate a one-call system of some kind, how are we going to get the excavators to comply with this? Is this something that you think could be—that the state level could do a much better job at than we could at the Federal Government?

And should we indicate some direct link, such as enforcement? I mean, I am not sure that a one-call system, while it sounds good and would be good, is really going to do what we intend it to do unless we can have as near-perfect as possible insistence by the excavators.

How do you see we can solve that problem, if you think there is one?

Mr. BARBEAU. That would be a problem, and in the legislation passed by Minnesota it comes to my office to enforce excavators being involved in the one-call system. We are right now putting together a non-profit corporation to develop the specs for a vendor to buy into the one-call system.

I am in the process of sending out letters across the state that we will enforce by penalty. There is a civil charge and a criminal charge in the Minnesota legislation for failing to participate in one-call or, if you don't participate in one-call and because of that an accident happens, you are responsible financially to that company and any cause and effect that comes from that.

I do think that the State of Minnesota is going to be working very hard on one call. It appears that the primary companies, Northern Natural Gas, Minnegasco, and NSP, are enthusiastic about one-call. They think it will work, that it is the way to go.

And the biggest concern they have is getting small operating excavators involved, and the state at this time is sending out what its power is in terms of letters and letting them know we intend to enforce someone's non-participation and we will go to the Attorney General and fine the company for not being involved, or if they damage something they are responsible for paying for it if they are not involved in the one-call system.

So in terms of who is best at it, I think the state probably has it, at least in Minnesota, that we will take that responsibility and do it, because we agree if there is not full participation it will not work very well.

Senator EXON. Mr. Johansen, what are your views on that?

Mr. JOHANSEN. I would agree that the biggest problem with any one-call system, whether it is a state-wide system or a system that a municipality or county may set up, is the enforcement of it with regards to the excavators.

We could make it—it is a lot easier for a public service commission or any other state regulatory agency to force their jurisdictional operators to belong to that one-call system and participate in it. It is very difficult to get to the excavators.

As an example, we have one of our gas pipeline operators in Missouri who maintains a list of over 5,000 excavators that they send an annual notice to telling them to call before they dig. That is just one of our operators. I am not sure what the number would be statewide as to the number of excavators that we might have to have some type of jurisdiction over.

Our current state law requires that the excavators call the operators and any penalty, I guess you might say, that results from them not calling is left up to the pipeline operator to take civil action against the excavators.

We have not gone the step farther that Minnesota has and put the jurisdiction for enforcing, the enforcement over the excavators, at the public service commission, and we currently have no plans to do that.

Senator EXON. Gentlemen, there are several legislative proposals and suggestions with regard to the Secretary of Transportation establishing qualifications and possibly a certification program for state employees who perform inspections.

What are your views on these proposals and on the present level of training and proficiency among state employees generally involved in pipeline inspections? We will start with you, Mr. Barbeau, on that one.

Mr. BARBEAU. Mr. Chairman, we in Minnesota support the efforts to develop qualification systems by the feds to qualify or certify state inspectors. We are reviewing our present program in Minnesota and intending to go back to the legislature to improve the requirements in order to become a state inspector, which would hopefully meet the standards of engineers, an engineering degree, or at least 5 to 10 years' experience in the pipeline industry.

Our secondary concern with that and our participation in the Transportation Safety Institute lies in having the dollars to train our people, and we urge that that be increased by DOT, or to help states, particularly Minnesota, in a situation where we are trying to revamp a program and look at some changes.

We want it as a strong standard. We would support that, and the dollars to back it up would be helpful.

Senator EXON. Mr. Johansen.

Mr. JOHANSEN. I think from the overall perspective of the states as a whole, we basically believe that the training requirements that we now have in our programs, in our grant program with DOT, for all intents and purposes that is a certification program.

The DOT has a requirement that any new inspector that comes on board with the state has to attend seven core courses at the Transportation Safety Institute within a period of three years. I think that type of—the type of training that TSI offers is excellent. It's broad-based in regulations; that in conjunction with on the job training and other industry seminars provides a very excellent training basis; and that really what we need to do is just formalize that into a certification program.

So I think basically the training that we have available to us for all intents and purposes is certification, and that is basically why the states really do not have any problem with the Secretary having the authority to make that a specific requirement.

Senator EXON. Mr. Johansen, Mr. Barbeau, thank you very much for you excellent testimony. We appreciate your coming in this morning, and you are excused.

We now will go to our last panel for the morning, panel number two: Mr. John Allen, manager of operations, Public Service Electric & Gas Company, representing the American Gas Association; Mr. Jerome McGrath, president of the Interstate Natural Gas Association; and Mr. Bob McMahan, president of the Shell Pipeline Company, who is representing the American Petroleum Institute.

Gentlemen, would you please come forward.

Let me say at the outset that we are delighted that you have come in this morning to help us wrestle with this problem and a problem that I am sure concerns all of us. Your full statements, without objection, will be entered into the record as if read.

I would invite each of you at this time to try to be as concise as possible with your remarks, because, mainly because of the interruptions of the chair, we are running late today and I therefore would hope that you could limit your comments to three minutes.

And we will start with Mr. Allen.

STATEMENTS OF JOHN ALLEN, MANAGER OF OPERATIONS, PUBLIC SERVICE ELECTRIC & GAS CO., REPRESENTING THE AMERICAN GAS ASSOCIATION; JEROME McGRATH, PRESIDENT, INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA, ACCOMPANIED BY JOSEPH J. FRATINO, VICE CHAIRMAN; AND BOB McMAHAN, PRESIDENT, SHELL PIPELINE CO., REPRESENTING THE ASSOCIATION OF OIL PIPELINES AND THE AMERICAN PETROLEUM INSTITUTE

Mr. ALLEN. Thank you. Thank you, Mr. Chairman and members of the subcommittee.

My name is John Allen. I am manager of operations for Public Service Electric & Gas Company of Newark, New Jersey. Today I am appearing for the American Gas Association in my role as incoming Chairman of its Coordinating Group for Pipeline Safety.

The pipeline safety program as currently funded protects the public to the maximum extent practicable at a reasonable cost to the public. Accordingly, AGA strongly supports reauthorization of the present pipeline safety program for a two year period, which would permit continued effective enforcement of the Natural Gas Pipeline Safety Act.

Because the current level of regulation of pipeline operators provides maximum protection for the public, any attempt to make the regulations more stringent would only increase the cost of implementing this already effective program, with no increase in pipeline safety. These increased and unnecessary costs would be borne by the natural gas consumer.

In short, the current pipeline safety program is effective. Even though one fatality is too many, the 24 pipeline fatalities that occurred in 1985, the last full data year, are much lower than the number of fatalities from other modes of transportation.

In fact, fully 63 percent of all gas pipeline incidents over the past 16 years were caused by outside force damage, not by pipeline operations.

I will conclude this morning by briefly discussing S. 888, the Pipeline Safety Act of 1987. Even though S. 888 targets mainly hazardous liquid pipelines, several sections would affect natural gas pipelines.

First is submissions of maps and other information to state and local agencies. This information should only be sent if requested by the state agency. Otherwise, these agencies could be inundated with voluminous unsolicited information. Moreover, unintentional misuse of this information could lead to severe safety consequences.

One-call systems. The state should be left with the discretion to determine if one-call is the best way to prevent third party damage. These programs are most effective if all underground facilities are required to participate.

Smart pigs. This technology is used where appropriate, but its widespread use should not be mandated at this time.

Increase in Federal inspectors. Even though the proposed increase in safety inspectors is designed to apply only to hazardous liquid pipelines, it could have a spillover effect to natural gas pipelines. Additionally, pipeline safety user fees should not be used to become a safety inspector full employment fund. As we read S. 888, this could become a reality.

These as well as other issues are adequately addressed in the provisions of H.R. 2266 approved by the House Energy and Commerce Committee. H.R. 2266 is the result of many weeks of discussion between the committee and the public. We generally commend this bill to you as you consider the Natural Gas Pipeline Safety Act reauthorization.

In conclusion, the present pipeline safety program has worked well, and the reauthorization of the Natural Gas Pipeline Safety Act should leave the present regulatory scheme in place. However, we do support H.R. 2266 as a consensus document. A multi-year reauthorization of the Natural Gas Pipeline Safety Act should be passed by Congress and enacted into law as soon as possible.

Thank you for allowing me to testify before you today. I will be happy to answer any questions you may have.

Senator EXON. Mr. Allen, thank you very much. I will hold the questions until all the panel have had a chance to testify.

We are happy to recognize you at this time, Mr. McGrath.

Mr. MCGRATH. Thank you, Mr. Chairman.

I am Jerome McGrath, President of INGAA, the Interstate Natural Gas Association of America. I am accompanied on my left by

Mr. Joseph J. Fratino, Vice President of Engineering, Columbia Gas Transmission Corporation, who is also Vice Chairman of INGAA's Construction and Operations Committee.

We believe the Pipeline Safety Act currently provides a more than adequate framework for regulating pipeline safety. The overall safety record of the industry is excellent. Indeed, the National Transportation Safety Board's data consistently shows that pipeline transportation is the safest mode of transportation available.

Of course, while our industry has an excellent safety record, we are not satisfied as long as there is even one injury or fatality.

We fully support a reauthorization bill which would include proposals to enhance public safety and benefit the regulated community. We believe such a bill should include:

Minimum qualification standards for state pipeline inspectors;

Authority for DOT to condition state grant funds;

Closer liaison between DOT and state agencies;

And penalties for damaging pipeline facilities and markers.

We would also support underground utility damage prevention programs and one-call systems if they include everyone connected with underground utilities, excavation and construction activities, and state and local public works agencies.

While S. 888 primarily affects hazardous liquids pipelines and not natural gas pipelines, because the two Acts are parallel in so many respects we do have concerns over many of S. 888's provisions.

For example, the requirement for frequent additional testing is totally unnecessary, extremely expensive, and virtually impossible to accomplish. There are already 19 specific regulations requiring testing and inspection of natural gas pipeline facilities.

Furthermore, DOT now has the authority to require additional testing and inspection of an operator if they find that proper maintenance procedures have not been followed and the safety of the public is in question.

Hydrostatic testing is the only sure way of testing the integrity of a pipeline. Such periodic testing of the entire pipeline system would be an enormous task, requiring duplicative or redundant facilities and costing billions of dollars, ultimately to be borne by consumers.

Sections 3 and 6 would establish requirements to provide extensive detailed information to local communities and public safety agencies within one-half mile of a pipeline. Mr. Chairman, we are already subject to extensive community right to know regulations.

We must maintain contact with people living or working near the pipeline. We must prepare emergency plans. We must acquaint local emergency response agencies with special requirements of our facilities and coordinate emergency response actions.

We must engage in educational programs for the public, appropriate governmental agencies, and persons engaged in excavation or construction-related activities. And we must post warning and right-of-way markers.

We particularly oppose the requirement that operators should provide detailed system maps, descriptions of facilities, and company manuals to all nearby local jurisdictions, fire departments, and

public safety agencies. Such sensitive information could easily fall into the wrong hands.

Additionally, the presence of detailed maps and records could tempt some local agencies to respond to incidents without consulting with the pipeline operator. Such actions could easily turn a relatively minor incident into a major disaster.

Section 3 of S. 888 would also require pipelines to install automatic shutoff valves. The major problem with these valves is the very real potential for them to close by mistake due to normal fluctuations in pipeline operating pressures.

Further, there is little or no safety benefit to be gained by installing automatic shutoff valves, since they do little to reduce the likelihood of a fire following an accident.

In conclusion, the record of interstate natural gas pipelines offers strong evidence that the current safety program works well, and we remain dedicated to providing a safe and efficient service to the public. However, ill-conceived and onerous safety requirements would not serve the public, but would divert limited operator resources from ongoing and effective safety programs.

That concludes my statement, Mr. Chairman, and we would be pleased to answer any questions the subcommittee may have.

[The statement follows:]

STATEMENT OF JEROME J. MCGRATH, PRESIDENT, INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA

Mr. Chairman and members of the subcommittee, I am Jerome J. McGrath, President of Interstate Natural Gas Association of America (INGAA). I am accompanied by Mr. Joseph J. Fratino, Vice President of Engineering, Columbia Gas Transmission Corporation, who is also the Vice Chairman of INGAA's Construction and Operations Committee. We appear here today on behalf of INGAA's member companies to express our views on reauthorization as well as other aspects of the Natural Gas Pipeline Safety Act of 1968.

INGAA is a non-profit national trade association representing virtually all of the major interstate natural gas transmission companies operating in the United States. Our companies move natural gas from the producing areas to distributors across the nation who, in turn, sell the gas to the ultimate consumer. Approximately 90 percent of the natural gas transported and sold annually in interstate commerce flows through more than 200,000 miles of pipeline owned and operated by INGAA's member companies. They are subject to the design, construction, operation and maintenance safety standards for natural gas transmission lines mandated by the Natural Gas Pipeline Safety Act of 1968 (49 USC 1671, *et seq.*) and prescribed in Title 49 of the Code of Federal Regulations, Part 192 issued by the Secretary of Transportation.

We believe the Pipeline Safety Act, as amended, currently provides a more than adequate framework for regulating pipeline safety. The overall safety record of the industry is excellent and generally acknowledged as such by all. Indeed, the National Transportation Safety Board's annual analysis of transportation fatalities has consistently found that transportation by pipelines is the safest mode of transportation available. Although we believe our industry has an excellent safety record, we are not satisifed as long as there is even one injury or fatality. Consequently, our members devote a significant amount of their resources to reducing the number of incidents.

In our opinion, this record reflects favorably upon the sound maintenance and operational standards developed and applied by the industry throughout its history. Further, we believe this record substantiates a position we've long held—that interstate gas pipeline operators are responsible individuals who historically have designed, built, operated and maintained pipeline facilities in a safe manner.

The gas pipeline industry's enviable safety record did not begin with passage of the Natural Gas Pipeline Safety Act. It should be noted that the federal standards were largely based upon consensus standards developed and used by the industry many years before the enactment of the Natural Gas Pipeline Safety Act of 1968.

Our primary concern is, and always has been, the protection of human life and property. Interruptions in service, loss of natural gas, damage to facilities, costly repairs, potential civil suits and the like are unacceptable from a practical standpoint. It has always been in the best interests of the industry to protect the health and welfare of the public through safe, reliable, cost effective service. This has been, and will continue to be, the industry's incentive to remain actively engaged in every aspect of pipeline safety. With this background, I will address the issues raised by the Subcommittee.

INSPECTIONS AND PERIODIC TESTING

INGAA does not believe that mandating more frequent pipeline testing and inspection will materially improve pipeline safety. Adequate testing and inspection requirements, we believe, are already in place. There are twelve different sections of 49 CFR Part 192 which, including subsection requirements, contain a total of nineteen specific regulations requiring testing and inspection of natural gas pipelines and pipeline facilities at varying, though limited, time intervals. Enclosed with my statement is a listing of these specific sections of Part 192. Furthermore, when an operator's leak history, line failure record or history of corrosion control and visual inspections indicate that the integrity of the facility is in doubt, or that proper maintenance procedures have not been followed and the safety of the public is in question, DOT now has the authority to require an operator to confirm the integrity of the pipeline.

Suggestions have been put forward that integrity testing be conducted more frequently—as often as every two or three years. In our view, such a requirement would be not only unnecessary, but extremely difficult if not impossible to accomplish. The only method which can be used for such an integrity testing program involves the use of hydrostatic testing. This procedure entails taking a section of the pipeline out of service, venting to the atmosphere all natural gas in the section, running a cleaning device called a pig through the section, filling the section with water, pressurizing it to the desired level and holding the pressure for a specified period of time, and then disposing of the water in an environmentally acceptable and sound manner.

This is a very simplified explanation of the procedure since each step mentioned requires many time consuming, difficult and costly tasks. For example, the ends of each test section may have to be excavated, the pipeline cut, pig launcher and receiver facilities constructed and installed, and some pipeline valves replaced to allow the pig to pass through. Additionally, special evaporation and settling ponds may need to be constructed to hold the discharged water. After completion of the test, the launcher and receiver must be removed, the pipe rewelded and the new welds x-rayed. The pipe must be recoated, rewrapped and reburied, and ground surface areas must be restored to their original condition. A lot of heavy construction equipment and manpower is required to accomplish all of this. It takes much detailed planning and effort in order to minimize service outages and product loss and to maintain public safety in the work area.

Furthermore, the idea of requiring frequent integrity testing is not very realistic, since major portions of most pipeline systems cannot be taken out of service without interrupting the service to significant portions of the population for an extended period of time. Hundreds of thousands of pipeline customers are serviced by single-line systems. Therefore, to take the line out of service for a mandated test would require either duplicate and redundant facilities or an alternate method to continue supply to the customer during the outage.

In many areas, particularly in the West, water for hydrostatically testing a pipeline is extremely limited and can only be obtained by permit during certain times of the year or purchased at another location and trucked to that test site. In the remote areas where some of our pipeline companies operate, this also means construction of an access road to the test site, and may also mean trucking the discharge waters to a specified disposal site. As an example of the magnitude of this problem, one INGAA member reported it would take 532 million gallons of water to test its system of approximately 8,000 miles.

In addition to the problem of obtaining clean water in sufficient quantities at the test site, there are other problems associated with water usage. These include the requirement to obtain state or federal permits for each hydrostatic test, which requires a 30-to-60 day review period, and sampling and analysis of the water source, discharged test waters, and waters receiving the discharged test waters.

While natural gas is used year-round, weather conditions and heating requirements would dictate that the testing program for most of the country be restricted

to the off-season, or summer months, at the same time as normal and essential company construction and maintenance programs are being pursued and underground storage reservoirs are being refilled for the next heating season. Refilling storage reservoirs requires five to seven months to complete, and this process usually begins in April as the heating demand lessens. As a consequence, virtually impossible scheduling complications and conflicts with the testing program would be created.

Another problem which must be addressed in conjunction with a mandated testing program would be the loss of billions of cubic feet of natural gas each year due to blowing down and purging each section of the pipeline to be tested. One of our members, with a 10,000 mile pipeline system, estimates its loss alone would be approximately four billion cubic feet (BCF) of gas each year—enough gas to supply approximately 38,000 homes for one year.

As I pointed out earlier, our members engage in continual inspection and maintenance programs as a matter of common business practice and as required now by law. As potential flaws are detected, they are corrected. Hydrostatic testing is but one of a number of different procedures that may be performed, depending upon what the needs of a particular pipeline might be, and if the leak and maintenance history or other factors relating to a particular pipeline segment justifies it.

INGAA does does not object to more frequent inspection of pipeline facilities by the Department of Transportation. While we question the need for additional inspectors and their value, we do not object to the suggestions for inspections on a biennial or annual basis.

With respect to the question of additional inspectors, and the funding required, I would like to take this opportunity to reaffirm our opposition to the imposition of a user fee to fund a public interest regulatory program. As we testified before this Subcommittee on March 28, 1985, such a "fee" is nothing more than a tax levied by a federal agency. The unconstitutional nature of both the wrongful congressional delegation of its taxing authority and a "fee" that is really a tax has been recognized in the Mid-America Pipeline case. This "fee" clearly violates the principle that fees are appropriate when a "special benefit" is provided the user of a service or facility (*New England Power* v. *FPC*, 415 U.S. 345 (1974)). There is simply no sound rationale to justify this user fee other than an expedient method to raise revenue.

Consequently, we support the current legal challenges being brought against the user fee system and are in full accord with the preliminary finding and recommendation in the Mid-America Pipeline Company case. But regardless of outcome of that proceeding, we would urge Congress to return funding the program through general revenues. During the House Committee hearings earlier this year, we noted an underlying philosophy that DOT's regulatory program could be expanded significantly with no cost to the U.S. Government. We believe this raises the question of diligent oversight when the funding comes from industry sources rather than general revenue funds.

QUALIFICATION OF PIPELINE OPERATORS AND INSPECTORS

INGAA believes that it may be appropriate for certain categories of operators, such as small intrastate, municipal and privately owned distribution pipelines and master meter operators to be subject to some form of a certification, qualification, or testing program. However, we believe this should be a state responsibility, and incentives for appropriate training and strict enforcement of the regulations should be encouraged.

Interstate transmission companies have traditionally employed highly competent individuals. The nature of their operations requires the use of many Registered Professional Engineers, certified welders, welding inspectors and corrosion specialists, and other experts. Continual professional development is encouraged using in-house, trade association, professional society and educational institution programs. Furthermore, current regulations require the use of fully qualified individuals.

Although in the case of interstate pipelines a licensing or certification program is unnecessary, INGAA does not object to DOT being given the discretionary authority to establish such a program if they feel it necessary. INGAA would also recommend, however, that any such program be established on a self-certification basis. This should include DOT's review and certification of a company's training and testing program. If DOT was required to launch a full-blown licensing effort, it would be nearly impossible to administer, given the resources available to DOT and the great variety and complexity of jobs within transmission pipeline companies. We believe the emphasis should be on the development of a training and testing program that would ensure a minimum level of knowledge for operators of even the smallest systems.

With respect to state and federal inspectors, we recommend the Secretary be given authority to prescribe the minimum qualifications required for state pipeline safety inspectors. This would provide greater uniformity in enforcement and largely eliminate the problems experienced by our members in dealing with state inspectors who possess a wide variance in knowledge and experience. The Secretary should also be given the authority to condition state grant funds on compliance with the minimum qualification standards, and to require that money be used for the direct costs of administering state pipeline safety programs. We believe these recommended changes will significantly improve the overall pipeline safety program.

"ONE-CALL" NOTIFICATION SYSTEMS

The leading cause of pipeline accidents is third-party or outside force damage. In our view, the single most effective step that could be taken to significantly reduce the possibility of accidents to natural gas pipelines would be the encouragement of "one-call systems", established as part of an underground utility damage prevention program. In order to be effective, "one-call" system participation must be made mandatory for everyone connected with underground utilities, excavation or construction activities, and state and local governmental public works agencies. This will contribute to a significant reduction in outside force damage to pipelines. To date, the pipeline industry has been in the forefront of the effort to expand the system and make it more effective, and we encourage the Congress to include in the Pipeline Safety Act reauthorization the strongest possible encouragement for local and/or State governments to establish such systems. Ideally, every state should have damage prevention laws and a "one-call" system.

COMMUNITY AWARENESS

INGAA believes the current regulations (sections 192.614, 192.615, and 192.707) already contain more than adequate requirements for gas pipeline operators to provide community notifications, liaison with local fire and public safety agencies, and to post warning and right-of-way markers. The industry is already required to prepare emergency plans; acquaint local emergency response agencies with the special requirements of their local pipeline facility; and coordinate emergency response actions, including training of local fire personnel; and engage in an educational program for customers, the public, appropriate governmental agencies, and persons engaged in excavation or construction related activities.

We are opposed to proposals that operators provide copies of their detailed system maps, description of facilities, and operations, maintenance, and emergency manuals to all nearby local jurisdictions, fire departments, and public safety agencies. We strongly feel that broad distribution of that information could be harmful from a safety and security standpoint. Sensitive information could easily fall into the hands of vandals, disgruntled or unstable individuals, extortionists, or worse. Additionally, the presence of detailed maps and records could encourage local agencies to take unilateral actions without consulting with the pipeline operator. Such action could, in fact, easily turn a relatively minor incident into a major disaster. In addition, this requirement would be an unnecessary expense and burden since the information would be largely meaningless to most public safety agencies.

However, recognizing the strong desire on the part of some to have additional information available to local emergency response agencies, INGAA members would be willing to provide reasonably detailed information to a central agency for each state in which the pipeline operates. These agencies could then make it available to those appropriate local entities who desire to make use of it. We believe this is a fair compromise that is administratively feasible for pipelines and that meets the legitimate needs of state and local governments.

AUTOMATIC AND REMOTE CONTROL SHUTOFF VALVES AND LEAK DETECTION SYSTEMS

Suggestions have been made to mandate the use of automatic shutoff valves. If adopted, we believe such a requirement could actually create more hazardous conditions on the pipeline. These type of valves are not 100% fail-safe because they are subject to power and communication interruptions, mechanical breakdowns, and vandalism. However, the major problem with these systems is the potential for false closures, since it is very difficult to set the sensitivity of the device to ensure that it functions as desired.

Most line-break detection equipment and automatic shutoff valves operate on a rate of pressure drop or rate of flow in the pipeline. It is difficult to establish the parameters necessary for a particular location due to varying operating conditions.

The adjustment on the detection equipment must be able to detect a rupture, but not be so sensitively set that the valve will shut during "normal" changes in flow conditions, such as several compressor engines being turned on or off in a short period of time, or a large market draw taking place quickly within the system. If automatic shutoff valves are mandated, these false closures could disrupt service to thousands of customers, creating a potential safety problem downstream of the closure.

The industry does use some remote-control and locally controlled automatic valves, since they can be useful in certain specific locations. These are valves that can be closed from a central location for operational purposes. The impression held by many is that these valves, when activated, quickly stop the flow of gas. This is incorrect. Even if the valves close immediately it takes five to ten minutes, under the best of conditions, before a decrease in gas flow in the damaged section becomes apparent, depending upon line size and pressure. In transmission line incidents, ignition usually occurs at the time of rupture and nearly all the damage is done within two or three minutes. Thus, such valves are not really practical as a damage prevention device.

S. 888

S. 888 primarily hazardous liquid pipelines, not natural gas pipelines. However, because the Hazardous Liquid Pipeline Safety Act and the Natural Gas Pipeline Safety Act are parallel in many respects, the provisions of S. 888 are of concern to us. For example, Section 2 of S. 888 would give DOT authority over the routing of liquid pipeline facilities. For natural gas pipelines, the routing question is part of the Federal Energy Regulatory Commission's certification responsibility. INGAA would strongly oppose giving such authority to a second agency.

We note that Sections 2(c) and 12(a) would amend Sections 9001 and 9003(h) of the Solid Waste Disposal Act (42 USC 6991) concerning underground storage tanks. Setting aside the merits, we question whether that is really an appropriate issue for inclusion in pipeline safety legislation.

Section 3 of the bill amends the Hazardous Liquid Act to set forth new statutory concerning leak detection and prevention. While many of these provisions essentially overlap existing law. Subsection (c)(6) would mandate installation of remote control shutoff valves on liquid pipelines. Subsection 3(k) would require that such valves be spaced at four mile intervals in urban areas and every twenty miles in rural areas. As we noted earlier, remote control valves are of limited value and to mandate their usage on a widespread scale is to ignore the serious practical issues involved, such as the problem of supplying power to each and every such valve, and the real threat of false closures.

Subsection 3(d) would remove the preemption authority in the Act and allow states and local governments to adopt more stringent regulations. INGAA believes the preemption authority is essential to maintain a consistent, rational, workable pipeline safety system. In fact, one of the principal benefits of the Natural Gas Pipeline Safety Act is the uniformity brought to the system of safety regulation.

Section 6 of S. 888 would make liquid and natural gas pipelines subject to the Emergency Planning and Community Right-To-Know Act of 1986 (42 USC 1102). INGAA opposes this suggestion. We believe the notification requirements in the current regulations (Sections 192.614, 192.615, and 192.707) essentially achieve the same goal as the community-right-to-know statute, and it would be poor policy to require one set of community liaison requirements under the pipeline safety acts while requiring possibly inconsistent requirements under other statutes. The framework provided by the current law has worked exceptionally well and any amendments to the program should be made within the context of that current framework.

SUMMARY

In summary, it is our belief that current federal standards, if followed in the design and operation of a pipeline system, assure the long-term integrity and reliability of gas pipelines and thus, the long-term safety of the public. Additional oversight by Federal agencies would be unnecessary duplicative, would not contribute to the safety and well-being of the general public, and would add substantial costs to the design, construction and operation of a pipeline system.

Our industry remains dedicated to providing a safe and efficient service to the public. The record of the interstate natural gas pipelines offers prima facie evidence that the current level of regulation of pipeline operations effectively ensures this safe service. Therefore, we urge the Subcommittee to seriously consider our comments and recognize that there are very limited potential benefits in making whole-

sale amendments to the Act. Ill-conceived and onerous safety requirements would divert limited operator resources from ongoing and effective safety programs to the overall detriment of the pipeline safety effort.

That concludes our presentation, Mr. Chairman. We thank you for the opportunity to submit the views of our membership on this important subject. We would be pleased to answer any questions the Subcommittee may have.

Senator EXON. Thank you, Mr. McGrath.

Mr. McMahan.

Mr. MCMAHAN. Thank you, Mr. Chairman. My name is Bob McMahan, and I am the president of Shell Pipeline Corporation.

I am here today on behalf of the Association of Oil Pipelines and the American Petroleum Institute. The AOPL is an unincorporated association of 79 common carrier oil pipeline companies. The API is a national trade association representing over 200 companies and 5,000 individual members engaged in all aspects of the petroleum industry. Together these organizations speak for virtually all of the U.S. transporters by pipeline of petroleum and its products.

With me are Mr. Pat Corcoran and George Fox. Mr. Corcoran is the executive director of the AOPL, and Mr. Fox is the vice president of Technical Services for Buckeye Pipeline Company. I am here today to present the views of the Petroleum pipeline industry on pipeline safety.

The AOPL and the API point out the outstanding safety record that petroleum pipelines have achieved under current legislative authority and regulation. Petroleum pipelines are responsible for almost one-fourth of all the U.S. intercity freight, maintain more than 220,000 miles of pipeline facilities, yet consistently are the safest mode of transportation by far according to the statistics of the National Transportation Safety Board.

The industry has been able to accomplish this high level of safety through a combination of factors, advances in technology, industry technical safety requirements mandated by the Department of Transportation, economic incentives to minimize damage, and a sincere desire on the part of the companies in the industry to be good citizens.

Unfortunately, a tragic accident occurred in Mounds View, properly bringing into question the adequacy of regulations governing the safety of oil pipelines. We have taken what we believe to be an objective study of the proposals advanced in the various legislative initiatives, including Senate Bill 888. A number of the provisions of these bills appear to be within the purview of the current Department of Transportation Regulations and can be accomplished by administrative actions. Others, such as the use of mandatory one-call systems are concepts that the industry has advocated for some time.

Many of the other proposals, however, while laudable in intent, involve the application of technology that does not yet exist, the application of existing technology that is useful only in certain circumstances, as well as the adoption of engineering and construction practices that seem to us to be unworkable from the standpoint of operations and maintenance. Others, such as siting restrictions, seem reasonable at the outset but have practical constraints. For example, the acquisition of a 300 foot right-of-way instead of the usual 50 foot right-of-way would be virtually impossible to acquire at any reasonable cost, even in rural areas. In addition, there

are a number of urban areas where no conceivable expenditure could secure such a corridor. We would have to abandon transportation in such area with the substitution of other modes of transportation that are far more costly and are orders of magnitude more risky both from a safety and environmental standpoint.

Attached to our written testimony is a comprehensive study we have undertaken of current pipeline safety levels and the various proposals which have been offered, some of which may impose new risks which we have no experience in mitigating. The net result of these proposals would be to impose an enormous cost of some $32 billion on the oil pipeline industry and society without making our facilities any safer for our employees or the general public.

We have worked closely with the House committees and have been examining pipeline safety in the past several months and are pleased that the current draft legislation includes initiatives that we have proposed for the utilization of one-call systems and public education programs.

These new requirements address areas in which there can be a positive effect on pipeline safety with manageable costs. We are pleased to be able to state that we support the preponderance of other provisions in these bills as well.

We do object, however, to three provisions contained in the current bills which address marginal safety issues at high cost, the first of which is certification of operators. The operators of hazardous liquid pipeline systems are required to develop and maintain detailed policy and procedure manuals. The employees who operate these systems are supervised and must be competent in the application of these rules because the liabilities are greatly associated with unsafe operations. Operational procedures are reviewed as part of the Department of Transportation inspections. The combination of operators' programs, the ones we have in place, risk of liability and the Department of Transportation oversight make the addition of a certification program costly and unwarranted.

Secondly, as regards to the regulation of carbon dioxide pipelines, the lack of flammability and nontoxic characteristics of carbon dioxide and the outstanding safety record for that segment of our industry do not make a case for inclusion under the current regulations of the Hazardous Liquid Pipeline Safety Act. We feel that in light of the concerns surfaced, however, about the other properties of CO_2, it would be more prudent to direct the Department of Transportation to analyze the risks associated with pipelining CO_2.

Thirdly and lastly, the proposal to mandate the frequency of Department of Transportation inspections to every two to two and a half years we feel would be better handled in a manner where frequency of inspections would be adjudged by the Department of Transportation based on such factors as the pipeline route, operating history and other pertinent factors. Some lines would likely be inspected less frequently than others. However, it would be a more effective utilization of the work force.

Mr. Chairman, we stand ready to work with your committee, with the Department of Transportation to adopt changes in our operations that can be justified to improve the safety of oil pipelines.

Thank you very much.

[The statement and questions follow:]

STATEMENT OF BOB MC MAHAN, PRESIDENT, SHELL PIPE LINE CORP, ON BEHALF OF AOPL AND API

Good morning, Mr. Chairman. My name is Bob McMahan, and I am President of Shell Pipe Line Corporation. I am here today on behalf of the Association of Oil Pipe Lines (AOPL) and the American Petroleum Institute (API). AOPL is an unincorporated association of eighty-nine common carrier oil pipeline companies. API is a national trade association representing over 200 companies and 5,000 individual members, engaged in all aspects of the petroleum industry. Together these organizations speak for virtually all of the U.S. transporters by pipeline of petroleum and its products.

With me are Pat Corcoran and George Fox. Mr. Corcoran is Executive Director of AOPL; Mr. Fox is Vice President Technical Services, of Buckeye Pipeline Company. I am here today to present the views of the petroleum pipeline industry on pipeline safety.

Liquid petroleum pipelines are the safest mode of transportation in the United States. There are more than 220,000 miles of petroleum pipelines, which together transport almost one-fourth of all intercity freight in the U.S. Attached to our written testimony is a copy of the U.S. Department of Transportation record of petroleum pipeline safety statistics for the past ten years, alongside the results of comparable industries. You will notice that in the year 1984, our industry experienced no fatalities in which members of the general public were involved. That continues to be our goal for every year.

This outstanding safety record is the result of a number of factors, the most important of which is the industry's responsible approach to the design, construction, operation and maintenance of its facilities. Federal safety regulations support this effort by requiring consistent safety practices among the pipeline companies and from state to state. Among these requirements is the existing obligation to report major incidents. DOT has expanded upon this obligation significantly with a new rule which will become effective in later this month. Also, the industry has worked diligently to advance pipeline technology and operating practices that affect safety. The last forty years have seen great advances in corrosion control, in improved quality of pipe and equipment used in pipelines and in improved instrumentation for pressure control and leak detection.

There are many very real incentives for this industry to operate safely. These include responsibility to the public for potential loss of life, injury, and property damage; significant capital

investment; and the need to attract investor, employee and general public good will. Add to this one obvious fact -- a disabled pipeline does not transport oil or refined products, the one service we provide.

Of those accidents which do occur, the single largest cause has been third party -- excavator -- damage, an activity over which the operator has limited control. In order to minimize such third party accidents, present DOT regulations provide for routing proposed pipelines around congested residential and industrial areas where possible. Above ground pipeline markers are required especially at road and railroad crossings. However, even with signs marking pipeline routes, current public education programs regarding the hazards of digging around pipelines, and existing one-call systems, the threat of third party damage continues to be a major problem.

Safety Proposals and Costs

A broad range of proposals has surfaced recently to increase the regulation of pipeline safety. They include the imprudent elimination of federal preemption of interstate pipeline safety, the potentially unsafe and enormously costly double-walling of pipelines (building a pipe within a pipe), and arbitrary location and spacing of valves. These measures suggest a preconception that nothing less than massive additional regulations can assure an adequate level of safety to the public from pipeline operation. Nothing could be further from the truth.

Mr. Chairman, I have been unable to find in the various proposals to increase regulation of petroleum pipelines, any analysis which attempts to quantify any measurable improvements to public safety or reduction in property or environmental damage which would be achieved by these proposals. Considering the questionable safety consequences and enormous costs the proposals represent and the outstanding existing safety experience with petroleum pipelines, careful analysis is not only desirable, but imperative.

During the past several months we have undertaken an extensive survey of petroleum pipeline safety practices as part of our periodic review of such practices, as well as the many proposals which have been brought forward. Our study was completed in July, and we are pleased to furnish you with the attached final report. The results indicate that in each and every case where there are sufficient data to estimate the costs and benefits of specific proposals (except the proposal to mandate the use of one-call systems), costs are much greater than any potential benefits. The following proposals and costs are cited as examples:

- A requirement to equip all existing manually operated main line block valves on interstate petroleum pipelines for remote operation would require capital investment of at least $705 million, and annual operating costs of at least $38 million.

- A requirement to equip all existing mainline block valves on interstate liquid petroleum pipelines for automatic operation would require capital investment of at least $618 million, and annual operating costs of at least $54 million.

- A requirement to replace all line pipe on interstate petroleum pipelines installed before 1940 with new pipe would require an investment of over $1.8 billion.

- A requirement to hydrostatically test all interstate liquid petroleum pipelines over a three year period would cost over $601 million, not including potential lost revenues of over $800 million.

- We estimate that there are at least 46,000 miles of interstate liquid pipeline with an inhabited dwelling or structure not more than 150 feet away. Portions of these pipelines cannot be rerouted in a manner that would permit 150 feet of clearance from such dwellings or structures. A requirement to reroute those portions that can be rerouted to provide 150 feet clearance would cost at least $3.7 billion.

- A requirement to replace these 46,000 miles of pipelines with double walled pipe with continuous leak detection system would cost at least $22 billion.

- A requirement to reduce maximum allowable operating pressure to 60% of maximum test pressure in pipelines close to inhabited dwelling would result either in a reduction of liquid pipeline traffic and diversion to less safe modes of transport, or a cost of at least $2 billion for additional facilities to increase capacity at lower operating pressures.

These examples contrast with our estimate that the monetary value of total damage from interstate petroleum pipelines in the United States is on an order of magnitude of about $19 million per year, only a small fraction of which could conceivably be affected by the proposed legislation or regulations.

Recommendations for Improvements

Our analysis has revealed two areas in which additional requirements would be beneficial -- one call systems and community awareness. Year after year, the major cause of pipeline accidents is excavation damage. During 1986, one-third of all reportable incidents were due to third-party damage. One-call systems have become a proven method of alerting the excavator to the existence and location of underground facilities and have contributed to the reduction of pipeline accidents where they have been used effectively. It is our position that one call systems should be encouraged and supported, and participation by pipeline companies, utilities, and public works agencies and excavators alike should be mandatory.

Community awareness of pipelines is another area in which greater attention and uniformity are warranted. We believe that closer communication between pipeline companies and the local and state public safety organizations would improve the coordination which must take place in the event of a pipeline emergency. Also, a greater awareness of pipelines on the part of the general public and particularly people who live adjacent to pipeline rights-of-way possibly could contribute to the prevention and effective reaction to pipeline incidents. The industry has developed a number of efforts to address this need and is open to the consideration of others. Regulations exist under 49 CFR 195.440 to require each company to have a continuing public education program. We believe this requirement should be strengthened to specify to whom, how often and what kinds of information should be distributed.

We have worked closely with the House committees that have been examining pipeline safety in the past several months and are pleased that several initiatives we have recommended have become part of draft legislation. These initiatives have called for new requirements for the utilization of one-call systems and public education.

The House Energy and Commerce Committee has reported out H.R. 2266 and the House Public Works and Transportation Committee is considering a similar measure in the nature of a substitute. As we presently understand them, we are able to endorse these bills with three major exceptions, which we wish to discuss with you today.

The first concerns the provision that DOT establish a program to certify or license pipeline operators. The competency and thorough training of personnel responsible for the design, construction, operation and maintenance of petroleum pipeline systems are reflected by the excellent safety record of the industry. Petroleum pipelines transport nearly one-fourth of all U.S. freight, yet play a very minor role in damage to people, property and the environment. The largest cause of pipeline accidents which do occur is third party damage, an activity which would not be affected by pipeline employee certification.

Under already existing practice, petroleum pipeline operators are required to meet stringent and clear CFR Part 195 standards for design and operational safety parameters. Operators are also required to develop and maintain detailed policy and procedure manuals to guide their employees. Regulations are augmented by function-specific industry standards which also set minimum levels of design and procedure. The industry's desire to

continue safe operations, the risk of liability in the event of an accident, and government oversight of pipeline safety performance provide sufficient incentives to operators to employ and train their personnel in a manner to meet these regulatory and industry standards.

The potential costs of government certification are unknown, but there is reason to believe they would be enormous. The expensive administrative effort for both industry and government that would be required to support the proposed programs simply could not be justified by the limited (if any) safety benefit which could be achieved. We submit the competency level of operator personnel is fully adequate and thus does not warrant further governmental action.

The second provision we oppose is the mandate (contained in the House Energy and Commerce Committee version of H.R. 2266) that DOT regulate pipelines which transport carbon dioxide (CO_2). CO_2 pipelines have a number of characteristics that make this provision inappropriate:

- They have an outstanding safety record. Not a single casualty has occurred in the history of their operation in the U.S.
- They are built and operated to ASME B31 standards, the same standards which are the basis for the current DOT pipeline safety regulations.

Application of the federal pipeline safety regulations would not add anything in the way of additional incentives for CO_2 operators to perform their functions safely. CO_2 pipelines are operated by companies that have the resources to devote to the most stringent of standards, and do so in the interest of being good citizens and in full knowledge of the liability consequences of faulty operations. The record attests to this assertion.

Application of the regulations would, however, cause economic burden to CO_2 operators and ultimately consumers because of the paperwork reporting requirements and the "user fee" system by which pipeline operators subject to the DOT regulations support the federal pipeline safety regulatory and enforcement program. DOT responsibilities for establishing and administering the new program necessarily would divert limited DOT staff resources which could be used more effectively elsewhere. We have provided more detailed information on this issue in the attachment.

The most prudent course of action, should there be a concern that CO_2 pipelines present to public safety a risk that warrants federal regulation, would be for Congress to direct the DOT to furnish an analysis of that risk for evaluation by Congress during the next DOT pipeline safety authorization hearing process.

The third provision which we believe should be reconsidered is the proposed requirement that the DOT be held to an arbitrary time interval for its inspection of pipeline facilities under its jurisdiction. We understand that one House committee has recommended no more than two years between inspections and the other has recommended no more than two and one-half years. We submit a better approach would be to permit the DOT to prioritize the frequency of inspections for particular facilities according to such criteria as proximity to high population centers and pipeline operating history. Some facilities might warrant an inspection interval of less than two or two and one-half years; conversely there may be other facilities may justify inspections on a less frequent basis. A more flexible approach might make for a more effective program and better utilization of limited resources.

Mr. Chairman, this concludes my testimony. I am providing as attachments,*detailed analyses of a number of pipeline safety proposals we have examined. It is a pleasure to appear before your committee to discuss this important subject of pipeline safety. I assure you of our commitment to work closely with you and your staff as the committee process moves forward. I would be pleased to answer any questions you or your colleagues may have.

*The attachments are in the Committee files.

Shell Pipe Line Corporation

R. C. McMahan
President

Two Shell Plaza
P. O. Box 2648
Houston, Texas 77252

November 10, 1987

Senator Ernest F. Hollings, Chairman
Senate Committee on Commerce, Science, and Transportation
United States Senate
Washington, D.C. 20510-6125

Dear Senator Hollings:

SUBJECT: OCTOBER 6, 1987 SURFACE TRANSPORTATION SUBCOMMITTEE HEARING ON PIPELINE SAFETY

Your October 21, 1987 letter requested that I respond to several questions as a follow-up to the subject hearing. My responses are as follow:

1a. Pipelines used to transport carbon dioxide vary in age from 15 years to less than one year. The fact that these pipelines are relatively new and have been designed and installed in accordance with the latest technology and industry standards has contributed to their excellent safety record.

1b. The amount of exposure to carbon dioxide that would cause an individual to become asphyxiated is a function of the time an individual remains in an atmosphere containing a given percentage of carbon dioxide. Exposure to carbon dioxide concentrations of 10 percent in air could cause an individual to lose consciousness in approximately five minutes and could eventually cause death. Exposure to carbon dioxide concentrations of 20 percent in air could cause an individual to lose consciousness in approximately one minute and could cause death in approximately 20 to 30 minutes. In the unlikely event of a pipeline release, the high escape velocity of carbon dioxide would cause large air entrainment and rapid dilution. Dangerous concentrations of carbon dioxide would be limited to the immediate vicinity of release.

1c. The other risks associated with an accidental release while transporting carbon dioxide are potential hearing damage and potential physical injury from the force of escaping carbon dioxide. These risks would exist only in the immediate vicinity of a release.

2. In the event of a rupture of one of our pipelines, written emergency response procedures would be utilized. Typically, such procedures include the following:

   a. Determine nature and location of the emergency.

   b. Take appropriate action to minimize volume released. Notify appropriate civil authorities. Dispatch personnel and equipment to contain released fluid and coordinate public safety measures with civil authorities.

   c. Clean up released fluid, repair pipeline and correct any environmental or property damage. (In the case of a carbon dioxide pipeline there would be no residual fluid to clean up.)

   d. Conduct a post-accident review to determine if precautionary measures and emergency response procedures were effective and amend them if necessary.

I appreciate the opportunity you have given me to testify on the behalf of the Association of Oil Pipe Lines and the American Petroleum Institute. Please do not hesitate to call on me if I can be of further assistance.

Very truly yours,

For: R. C. McMahan

Senator EXON. Gentlemen, I want to first thank you for coming here this morning. This is an area that we are continuing to look into. We seem to have some problems. I assure you that the committee is very dedicated to legislation to improve safety, and any legislation would not go to any undue bounds.

I listened with keen interest to your talk about S. 888 with regard to what you describe as unworkable widths, at least, with regard to some of the changes that would be made with regard to pipeline safety. There will be several questions that we will submit to each of you, and they will be included in the record since we do not have time to go into all of these this morning.

I would appreciate it very much if each of you would respond to those questions in writing at your earliest possible opportunity so we could include them in the record because we think a detailed record is very vital before we plunge further ahead in this area.

Just one or two questions, and then I will excuse you.

Please comment, one or all of you, as to the level of existing industry training programs for pipeline operators. How extensive is it? Are you satisfied that it is sufficient? Could it be improved upon? And in connection therewith, what factors would you suggest DOT consider in reviewing a company's training and testing program?

How do we improve on what you are doing now, or is any improvement necessary?

Mr. MCGRATH. Mr. Chairman, I think our industry is, and has been for many, many years, engaged in extensive training programs for our personnel, particularly those in operations and those who are working with the pipeline itself. I would like, with your permission, to ask Mr. Fratino to respond to that since he is involved very directly in those kind of activities.

Senator EXON. We are happy to welcome him and get some expert testimony on this.

Mr. FRATINO. Thank you, Mr. Chairman.

As vice president of engineering for the Columbia Gas Transmission Corporation, one of the areas of responsibility in my department at a staff level is that of technical training as that technical training would apply to our staff people and our field technicians and field operators who are involved with the day-by-day operations of our pipeline system.

We have a comprehensive program both in-house with our own technical expertise, and outside of the company where we take advantage of the many programs that are offered to the industry, such as the corrosion short course, the gas measurement short course, pipeline research seminars and those sorts of things.

With regard to our in-house program, we have an ongoing dialogue with our operating people, and our staff department heads to identify those programs that are needed to continue to improve the proficiency of our people and to designate with the help of operations which people need to be exposed to and continue this program of training. We do that in-house as a matter of course on a continuous basis.

With regard to those outside training programs that are available to people in our company and other companies in the industry, we are right now in the process of putting together our 1988

budget, operating and maintenance budget, and in that program we identify which programs and which people are going to be assigned to the specific training courses that are available to us. Once we have identified that program, we try to adhere to it as carefully and as thoroughly as we can during the ensuing year.

That pretty much describes the ongoing technical training program that we have.

Senator EXON. Would you spell your name so that we could get it correctly in the record to help our reporter?

Mr. FRATINO. F-r-a-t-i-n-o.

Senator EXON. Thank you very much.

Gentlemen, I just have one last question for the record this morning, but again, we will be submitting questions to you.

Will one of you elaborate on your views regarding the user fee program which funds pipeline safety programs?

Any one of you who wishes to respond to that, and if the rest of you agree, no further comment would be necessary. I would leave it up to whichever one of you would like to respond to that.

Mr. MCGRATH. I would be happy to.

Senator EXON. Mr. McGrath.

Mr. MCGRATH. We do not feel that the user fee program is appropriate. Cindy Douglass mentioned the proceeding out in the U.S. District Court for the Northern District of Oklahoma, where a U.S. magistrate has found that the user fee is indeed an inappropriate delegation of a taxing responsibility, as we have maintained for many, many years. We were involved in some of the court proceedings which the magistrate cited going to the Supreme Court, where the Court held that the fees levied by another agency were inappropriate and were unlawful taxation.

Our position is that user fees are really for activities that are for the benefit of the public. We maintain, as Mr. Fratino and others have mentioned, our own extensive safety programs which are funded by the companies, and we do not believe that the user fees should be imposed. We believe they have the propensity to encourage the government to go into all kinds of programs because they do not have to spend any money; they just add on to the user fees and get the industry and ultimately the consumer to pay for those programs.

So we believe it is a general public benefit which should be paid for out of the normal taxation of the citizenry.

Senator EXON. Any differing views or any comments that anyone would like to make on that subject?

Mr. MCMAHAN. Mr. Chairman, the Oil Pipeline Association really has not taken a position on that issue, primarily because the membership, some are supportive of it and some are supportive of the issue that is being undertaken now, the effort undertaken to challenge the appropriateness of the methodology of user fees as they apply specifically to our industry.

Senator EXON. So you are saying, Mr. McMahan, that your organization is not in total agreement on that issue, is that right?

Mr. MCMAHAN. That is correct, yes, sir.

Senator EXON. We are familiar with that in the United States Senate. We know there are differences of opinion from time to time.

Mr. ALLEN. The American Gas Association has not established a position on the Mid-America Pipeline case, but we will respond to that in writing.

Senator EXON. Gentlemen, thank you very much. Once again, I appreciate your coming here.

The meeting is adjourned.

[Whereupon, at 12:00 noon the hearing was adjourned.]

[The following information was subsequently received for the record:]

AMERICAN GAS ASSOCIATION,
Arlington, VA, November 5, 1987.

SENATOR J. JAMES EXON,
Chairman, Subcommittee on Surface Transportation, Committee on Commerce, Science and Transportation, U.S. Senate, Washington, DC.

DEAR CHAIRMAN EXON: The American Gas Association (A.G.A.) would like to provide the Subcommittee with additional comments on two subjects raised during the October 6, 1987 testimony on the reauthorization of the Natural Gas Pipeline Safety Act of 1968, as amended (NGPSA). We request that these supplemental views be made an official part of the hearing record.

(1) A.G.A. has traditionally opposed the concept of user fees to finance the DOT pipeline safety program.

As far back as March 28, 1985 in testimony before the House Public Works Subcommittee on Surface Transportation, we unequivocaly stated our opposition to the concept of user fees to finance the pipeline safety program. We stated, "since pipeline safety benefits all of society, the brunt of the cost should be spread out over all those who benefit—who are, in effect, the 'users'. . . . A.G.A. opposes the concept of user fees in paying for pipeline safety regulations."

In the face of increasing federal budget deficits, however, our views and those of others in the industry were not heeded and today user fees are in place. Nevertheless, A.G.A. continues to oppose imposition of user fees to finance the operation of the DOT Office of Pipeline Safety.

In regard to the Mid-America Pipeline case. our witness, John Allen, stated in response to a question at the hearing that A.G.A. has no position on this case. To clarify his answer, although we are not a party to that case, certainly the position taken by Mid-America is consistent with A.G.A.'s views against user fees.

(2) The natural gas industry spends a great deal of time and money training its employees.

The excellent safety record of the natural gas industry is no accident. The industry prides itself on its safety record and on the training that already is in place for the natural gas employee. A.G.A. publishes an annual "Gas Industry Training Director" which lists a variety of manpower development and training programs available to A.G.A. member companies. The directory contains a list of programs that have been developed by over 160 A.G.A. member companies, associates, associations, and vendors that provide training in such areas as accident prevention, construction and maintenance, corrosion, emergency procedures, leak control, and safety. We have enclosed [1] a copy of the index from our directory.

It should be noted that this directory is only a partial list of training programs. Many of A.G.A.'s member companies develop training programs which are not contained in this directory.

A.G.A. believes that the training provided to the gas industry's employees is second to none. We are proud of our safety record, and we believe that the regulated gas industry's training of its employees accounts for the excellent safety record of the nation's natural gas transportation system. We hope Congress will not pass legislation which will require DOT to establish its own training programs.

Thank you for the opportunity to respond to these issues.

Respectfully,

MICHAEL BALY III.

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[1] The enclosure was not reproducible.

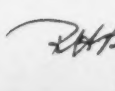
The following comments on S. 888 are provided by Richard H. Peifer of the South Dakota Department of Water and Natural Resources and submitted for the record at the request of Senator Larry Pressler:

1. Performance standards for new pipelines.
Most companies already include the "state of the art" pipeline technology. What is needed is some way of updating the existing pipelines, that is inexpensive. Cast iron pipe is a problem in city streets. Small leaks in the joints are very expensive to repair. Permits for opening city streets has more than doubled since 1980. Gas companies are sealing all the joints at one time and then repairing the entire street. Some of the low pressure systems have been replaced with polyethylene rather than repair the joints. (insertion) Existing lines need some cost relief so that state of the art technology can be used.

Testing and Leak Detection
Testing a one line or one way feed is not feasible because of the outage of service. The testing of a one way feed system would mean a minimum outage of a week. Gas and oil companies cannot shut off their supply to terminals and cities for this length of time. Methods of testing are adequately covered in the present safety regulations.

Notification
Small municipalities have no use for the maps showing the location of the pipeline system. This should possibly read that plans are available to local government entities showing exact location of facilities. This would apply to the fire departments also. The operation,maintenance, and emergency manuals, should be made a usable tool for the company personnel as well as a notification manual.
Notification of the property owners, residents and tenants creates an economic burden on the companies. In most cases the property deed has the pipeline easement as a part of the deed. Encroachment by builders on the pipeline easement cannot be stopped. Pipeline companies need help in establishing corridors for high pressure lines that will keep the public at a safe distance. In like manner public water supplies need protection from pipeline companies that would contaminate their water supplies. This encroachment should be addressed since it is in the public interest.
Patrolling, leakage surveys, and line markers are covered in 49CFR Part 192. The disparity between 192,193,and 195 should be corrected

Operating pressure
Reducing pressures in areas that are densely populated requires new pump stations to raise the pressure after densely populated areas. This means additional expenditure to the pipeline companies.
Release notifications should be coordinated with the "one call" or emergency 911 number. These people should notify the DOT or the state regulatory system immediately.

Shut-off valves
On hazardous liquid pipelines a pressure differential could activate a shut-off on the pump that would signal the operator to shut down the line. Shutting a valve before a pump is dangerous to the pipe in that high pressures would be built up in the line. Hydrolics of a pipeline are monitored on present pipelines. Some companies have alarm systems built in to the pressure monitoring of the pipeline
Training and certification are important to companies as well as regulatory agencies.
One call systems exist in some form in most states.It should be mandated with punitive damage awards to those not using the system.

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